

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-2				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number    1			Financial Analysis Support for				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: This action initiates WA 1-2 with an LOE of 1200 hours. Dale Ruhter is appointed as the WA manager and Michael Pease is appointed as the alternate WA manager. The contractor shall submit a work plan/cost estimate.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <span style="border: 1px solid black; padding: 2px;">22</span> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
04/30/2012   To   04/29/2014										
This Action:						584				
Total:						584				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Dale Ruhter						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number   703-308-8192				
						FAX Number:				
Project Officer Name   Shannon Sturgeon						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 703-605-0509				
						FAX Number: 703-308-7903				
Other Agency Official Name   Mimi Guernica						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 703-308-8428				
						FAX Number:				
Contracting Official Name   Christie Deskiewicz						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 202-564-3316				
						FAX Number:				

**CONTRACT NAME:** ERAS Analytical Support Contract  
**CONTRACTOR:** Industrial Economics, Incorporated

**CONTRACT NO.** EPW – 12-013

**Work Assignment No.** WA – 1 - 2

**Work Assignment Manager:** Dale Ruhter  
Office of Resource Conservation and Recovery  
(5303P)  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 20460  
Phone: (703) 308- 8192

**Alternate WAM:** Michael Pease  
Office of Resource Conservation and Recovery  
MC 5303P  
1200 Pennsylvania Ave, NW  
Washington, DC 20460  
Phone: (703) 308-0008

**TITLE:** Financial Analysis Support for 108(b) Rulemaking

## **BACKGROUND**

EPA is currently undertaking a rulemaking under CERCLA 108(b) which would require certain classes of facilities to post financial assurance for their liabilities associated with the production, treatment, storage and disposal of hazardous substances. (See 74 FR 37213 July 28, 2009 and 75 FR 816 January 6, 2010.) This rulemaking involves several financial analyses to be conducted to analyze rule options. Under a previous contract (EP-W-07-011), the contractor provided analyses involving the construction and evaluation of financial tests using credit ratings, financial statements and ratio analyses for hardrock mines and processors. At present, preliminary analyses have been conducted for both the extraction (mining) and processing portions of the potentially regulated universe and a draft background document created.

Under the previous work assignment (WA-B2) under this contract the contractor has evaluated potentially regulated companies' bankruptcy potential, prepared reports on historic rates of returns of various asset classes and has built a model that simulates trust fund performance under various scenarios. The bankruptcy potential evaluation will help inform the decision of which classes of facilities pose the highest risk of bankruptcy. The information on asset returns and the trust performance model will help EPA evaluate approaches to trust management and the rates of return from trusts which may inform the choice of a discount rate.



## **PURPOSE AND OBJECTIVES**

This work assignment intends to accomplish several objectives in support of the CERCLA 108(b) rule writing initiative. First, and most pressing, it will evaluate possible discount rates and trust management approaches for possible application in funding long term obligations in the proposed regulations (task 2). Second, it will use information collected as part of the financial test analyses to support the identification of companies that may present a higher level of risk of injury as a result of their corporate structure or bankruptcy potential (task 3). Finally, it will continue supporting the evaluation of financial tests as a method of self insurance for the hardrock mining sector and finish the production of a background document that explains the analyses conducted and the results (task 4).

At present the Agency is prioritizing the evaluation of discount rates and the analysis of trust fund performance. The discount rate work will likely be required as part of the interagency discussions on financial responsibility at mine sites in which the Agency has been engaged and thus is most urgent. A draft analysis of bankruptcy potential and corporate structure to refine the 'to be regulated universe' has been conducted and may need to be refined at a later date. A draft of the financial test analysis has also been conducted and may also need to be refined or revised before the background document describing the analysis and findings can be finalized.

### **Task 1: Work Plan and Management**

Within three days after the Work Assignment is provided, but prior to preparing the Work Plan or initiating any other task, the contractor shall discuss with the EPA WAM via telephone conference call the background and intent of the task and deliverables.

Within 20 days of receipt of this Work Assignment, the contractor shall prepare and submit a work plan, staffing plan, and budget. The work plan shall lay out cost and labor hour estimates by task. In staffing this work the contractor shall include management with experience with financial test analysis, the treatment of environmental obligations in bankruptcy and the operation of financial responsibility programs and knowledge of discount rate theories and applications. The contractor will also conduct general management activities under this task. These activities shall include such efforts as project financial administration, periodic participation in conference calls and/or meeting with the EPA WAM, preparation of monthly progress reports, contract administration and management efforts. The contractor shall also provide updates on the status of each task to the EPA WAM via telephone conversations at least weekly.

The predecessor work assignment (WA B-2) incurred over \$5000 in Contract Management Costs that were not delineated in the contractor's work plan. These costs accounted for approximately 5% of the cost of the work assignment. They were presumably incurred at the expense of some of the technical hours approved in the work plan since there was no written increase in the work assignment's budget to allow for them.

The work assignment manager received no formula for how Contract Management Costs would be or were calculated, and their percentage ranged wildly. For example, in August 2012 they were 3.7% of that month's billing. Two months later in October 2012 the dollar amount was

19% lower even though the billings were higher resulting in a percentage of 2.9%. January 2013's Contract Management Costs were higher than October 2012's even though January's Total Costs were only 2.2% of October's. This resulted in January's Contract Management Costs representing 60% of the invoiced amount. To put it slightly differently, the Contract Management Costs were higher than the Total Cost plus Fee for the technical work, a result the work assignment manager finds perplexing. In all, during a six month period the percentage Contract Management Costs varied by a factor of 20 from 2.9% to 60%.

The work assignment manager could

- find no explanation in the work plan for these charges,
- discern no pattern to either the dollar amount or percentage charge for Contract Management Cost during the previous contract period,

and so found it impossible to plan for them.

Therefore, in addition to the other requirements for the work plan, approval of the work plan for this assignment will be contingent upon the contractor providing the basis for how Contract Management Costs will be calculated and reflected on each month's invoice. The contractor shall also specify a ceiling for Contract Management Costs for this work assignment.

The Contractor shall describe in the work plan, how the Contractor plans to apply quality assurance (QA), and indicate in the work plan that the Contractor shall include a brief (e.g., one paragraph or less) summary of QA activities in the monthly progress/invoice reports to the WAM for this work assignment. Because the types of "data" involved in this SOW may mostly come from existing secondary sources which have already been subject to QA (e.g., peer-reviewed journals, audited financial statements and other Federal agencies such as the Securities Exchange Commission or the Mine Safety and Health Administration), the QA activities for this SOW may only require the Contractor to (a) examine data, calculations, and calculation results (e.g., evaluate numerical outliers), and (b) double-check spreadsheet calculation formulae.

## **Task 2: Analysis of Discount Rates and Trust Management for Funding Long Term Remediation Costs.**

As part of the proposed rule the Agency may allow trust funds (either standby in conjunction with a third party instrument or funded) be used to secure funds for long term obligations. The manner in which trusts are managed and invested can affect the amount of funds available for remediation work in the future. Additionally, trust investment strategies and returns may inform the discount rate chosen for long term obligations. For example, the Agency may allow the series of expected future payments required to fund long term water treatment at a site to be discounted at a rate reflective of projected trust fund returns to arrive at a present value amount. The selected discount rate may greatly affect the cost to industry of complying with the regulation and the likelihood that funds are available to meet future environmental costs, and thus public costs.

- A. The contractor shall use publicly available information, including that information collected to date on historic asset class returns, to refine the model of trust fund performance. The contractor

shall incorporate uncertainty and the variability of returns of various trust investment strategies. This may involve simulation analyses or other stochastic modeling.

- B. In addition, the contractor shall continue to analyze the various discount rates to assess the costs to industry arising from a given rate and the potential costs to the government at a given rate. This exercise should be informed by information on bankruptcy potential prepared to date as part of the financial test analyses. For example, how could information about companies' failure rates and timing of defaults be used to evaluate potential discount rates and their risks? The analysis should show the risk to the government at each rate and the variation in costs to industry at each rate.
- C. The contractor shall also revise the analyses in Task 2 A and/or B in response to workgroup comments as directed by the WAM.

### **Task 3: Analysis of Bankruptcy Potential and Corporate Structure:**

- A. The contractor, based on professional experiences and expertise, shall prepare a memo on corporate structure and how it relates (or does not relate) to the reliability of financial assurance instruments, in particular the corporate guarantee and financial test. The contractor shall budget for one memo approximately 5-10 pages in length with the possibility of revisions upon review by the WAM and EPA workgroup.
- B. Upon direction from the WAM the contractor shall provide an updated report on corporate structure and bankruptcy potential of companies operating in various commodity groups. The data for this task was collected and prepared under the previous contract (EP-W-07-011) and a draft of the report produced under the earlier WA (WA-B2) under this contract. The contractor may need to update the draft report by incorporating new companies into the report. This work will present the information in a way that will facilitate Agency decisions on whether certain commodities or classes of facilities pose a greater risk to the public as a result of their producers' or owner and operator's bankruptcy potential or corporate structure.

### **Task 4: Continue Work on Financial Tests for Hardrock Mining**

- A. Financial test analyses for hardrock mining and processing facilities. Under a previous contract (EP-W-07-011), EPA acquired financial information on hardrock mining and processing facilities (as well as chemical manufacturing, petroleum refining and coal fired power plant facilities). Under this task the contractor shall refine financial test analyses of the hardrock mining processing and extraction companies as necessary, and integrate the analyses to show aggregate results. Alternatives considered in these analyses shall include the alternatives previously investigated for hardrock mining companies under the previous contract. Task 4A may involve analysis of additional

provisions to the financial test proposal (e.g. a coverage multiple requirement analogous to that found at 40 CFR 264.143(f)(1)(i)(B) and (ii)(B)) or provisions in consent decrees.

- B. Additional technical reports, analysis, and briefings on financial tests. During Agency and interagency review of products by the contractor, additional reports and briefings may be necessary. The contractor shall, for budget purposes, plan on one paper of 5 to 10 pages in length and one briefing. The topics will be described by the WAM in technical directives.
- C. Finalize Background Documents for Hardrock Mining Rule Financial Test Proposal. Under a previous contract the contractor prepared a draft background document for the hardrock mining extraction universe. Under Task 4 C of this work assignment the contractor will update the background document to reflect any changes in the analyses that result from tasks 4A and 4B of this work assignment and then finalize the background document. The background document should cover the hardrock mining extraction and processing universe and provide information for the proposal on the information supporting the analyses, the methodologies followed, and the results of the analyses. The results should be shown for processing and extraction separately and integrated. This document should follow the same outline as the draft background document prepared for the hardrock mining extraction universe of facilities. WAM comments on the background document shall be incorporated and revised drafts of the document prepared as necessary.

<b>Deliverable</b>	<b>Due date</b>
<b>Task 1: Work Plan and Management</b>	
Telephone Discussion w/WAM	Within three days of work assignment initiation
Workplan, staffing and budget	Within 20 days of issuance of the work assignment
<b>Task 2: Discount Rate Analyses and Literature Review</b>	
A. Trust fund performance modeling	Draft report within four weeks of the effective date of the work assignment. Revised report two weeks after receipt of WAM comments.
B. Discount rate analyses	TBD based on TD from WAM Revised report two weeks after receipt of WAM comments
C. Revisions to analyses in response to workgroup comment	TBD based on TD of WAM Revised reports two weeks after receipt of WAM comments.
<b>Task 3: Analyses of Bankruptcy Potential and Corporate Structure</b>	
Memo on corporate structure and its	Draft memo within five weeks of the effective date of

effect on the strength of financial assurance instruments.	the work assignment. Revised report 2 weeks after WAM comments
Updated Analyses and results	TBD based on TD from WAM Revised report 2 weeks after WAM comments
<b>Task 4 Continue Work on Financial Tests for Hardrock Mining</b>	
A. Financial test analyses for hardrock mining facilities	
Financial test analyses of the hardrock mining extraction and processing facilities	TBD based on TD from WAM Revised report 2 weeks after WAM comments
B. Additional technical reports, analysis, and briefings on financial tests	TBD based on TD from WAM
D. Update, revise and finalize background documents for HRM financial test proposal	TBD based on TD from WAM Revised report three weeks after receipt of WAM comments

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-2				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number      1			Financial Analysis Support for				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: The purpose of this amendment is to approve the contractor's work plan/cost estimate dated 05/28/2013 with a LOE of 584 hours and \$59,809.98 (b)(4) cost (b)(4) fee).										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO (Max 2)    22										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 584				
04/30/2012   To   04/29/2014										
This Action:						0				
Total:						584				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Dale Ruhter						Branch/Mail Code:				
						Phone Number   703-308-8192				
						FAX Number:				
Project Officer Name   Shannon Sturgeon						Branch/Mail Code:				
						Phone Number: 703-605-0509				
						FAX Number: 703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
						Phone Number:				
						FAX Number:				
Contracting Official Name   Christie Deskiewicz						Branch/Mail Code:				
						Phone Number: 202-564-3316				
						FAX Number:				

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-2				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000002				
Contract Number EP-W-12-013			Contract Period 04/30/2013 To 04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number 1			Financial Analysis support				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From 04/30/2013 To 04/29/2014					
Comments: The purpose of this amendment is to designate Michael Pease as the WAM on this WA.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO (Max 2) <span style="border: 1px solid black; padding: 2px;">22</span> Note: To report additional accounting and appropriations date use EPA Form 1900-69A.										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE:				
04/30/2013 To 04/29/2014										
This Action:										
Total:										
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:			LOE:			
Cumulative Approved:				Cost/Fee:			LOE:			
Work Assignment Manager Name Michael Pease							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number 703-308-0008			
							FAX Number:			
Project Officer Name Shannon Sturgeon							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 703-605-0509			
							FAX Number: 703-308-7903			
Other Agency Official Name							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number:			
							FAX Number:			
Contracting Official Name Eulvid Rocque							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 202-564-8316			
							FAX Number:			

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-3				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014 Base                      Option Period Number    1			Title of Work Assignment/SF Site Name Support for OUST Rulemaking				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From   04/30/2013   To   04/29/2014				
Comments: This action initiates WA 1-3 titled "Analytical Support for Office of Underground Storage Tank (OUST) Final Rulemaking" with a LOE of 585 hours. Cho Yi Kwan is appointed as the WAM under this work assignment; Elizabeth McDermott is appointed as the Alt. WAM. The statement of work is attached. The contractor shall submit a work plan/cost estimate.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <span style="border: 1px solid black; padding: 2px;">22</span> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
04/30/2012   To   04/29/2014				0						
This Action:				585						
Total:				585						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name    ChoYi Kwan						Branch/Mail Code:				
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> <span>(Signature)</span> <span>(Date)</span> </div>						Phone Number    703-347-8908				
						FAX Number:				
Project Officer Name    Shannon Sturgeon						Branch/Mail Code:				
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> <span>(Signature)</span> <span>(Date)</span> </div>						Phone Number:    703-605-0509				
						FAX Number:    703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> <span>(Signature)</span> <span>(Date)</span> </div>						Phone Number:				
						FAX Number:				
Contracting Official Name    Christie Deskiewicz						Branch/Mail Code:				
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> <span>(Signature)</span> <span>(Date)</span> </div>						Phone Number:    202-564-3316				
						FAX Number:				



## **EPA CONTRACT NUMBER EP-W-12-013**

### **Statement of Work**

Work Assignment Number: 1-3

Work Assignment Amendment Number: 0

Title: Analytical Support for Office of Underground Storage Tank (OUST) Final Rulemaking

Contracting Officer Representative (COR): Cho Yi Kwan

Address: RPD/OUST  
Mail Code 5402P  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

Telephone: (703) 347-8908  
(703) 603-9900 (front office)  
(703) 308-0509 (FAX)

Alternate Contracting Officer Representative (COR): Elizabeth McDermott

Address: Same as above

Telephone: (703) 603-7175

### **BACKGROUND**

In 1984, Congress responded to the increasing threat to groundwater posed by leaking underground storage tanks (LUSTs) by adding Subtitle I to the Resource Conservation and Recovery Act (RCRA). Subtitle I required EPA to develop a comprehensive regulatory program for underground storage tanks (USTs) storing petroleum or certain hazardous substances. In 1988, EPA issued UST regulations covering three sections: technical requirements, financial responsibility requirements, and state program approval objectives (see 40 CFR Parts 280 and 281).

EPA published the proposed rule "Revisions to Existing Requirements and New Requirements for Secondary Containment and Operating" in the Federal Register in November 18, 2011 (<http://www.gpo.gov/fdsys/pkg/FR-2011-11-18/pdf/2011-29293.pdf>). The public comment period for the proposed rule ended April 16, 2012. EPA is currently planning to finalize its proposed revisions to the existing UST regulations.

### **PURPOSE AND SCOPE OF THIS WORK ASSIGNMENT:**

The purpose of this Work Assignment Amendment is to provide for analytical support related to costs, benefits, economic impacts, and technical analyses necessary to appropriately assess potential regulatory options related to the existing OUST program. The scope of this Work Assignment includes: methodology formulation and baseline development, data collection and assessment, analytical model

development, options analysis, assessment of analytical limitations, and document preparation. This Work Assignment shall build upon, but not duplicate work, conducted Work Assignment B-3.

## **WORK STATEMENT:**

### Task 1.            Work Plan, Progress Reports and Budget

Within twenty (20) days of receipt of this Work Assignment Amendment, the contractor shall deliver a work plan. This plan shall include a proposed level of effort, budget, schedule of tasks, and schedule of deliverables. A cost proposal shall accompany this work plan. The contractor shall budget for no more than two one-day trips for one staff member to Washington, D.C. to meet with EPA to brief on project planning and progress, as needed.

#### Deliverable(s) and Schedule:

Work Plan and Budget within allotted time frame identified above.

### Task 2.            Assessment of Baselines, Universes, and Cost Impacts Associated With Revisions to Proposed Rule

To assist EPA in evaluating the potential incremental cost impacts associated with changes to the proposed regulatory revisions, the contractor shall build upon previous cost modeling to analyze the baselines and universes affected, and estimate the potential cost impacts to the regulated community. Using available and/or updated cost data from EPA and/or from public comments, and building on work previously conducted under Work Assignment B-3, the contractor shall work with EPA to model various cost scenarios and baselines to reflect the impacts of potential revisions to the proposed requirements (e.g., potentially removing sections of the proposed rule; reductions in frequency of proposed testing requirements) and to provide sensitivity analyses. Different baselines that may need to be developed include using or separating out different tank population universes affected, varying assumptions regarding compliance rates, and projecting future decline in number of tanks. The contractor shall also adjust the cost model to reflect the latest active tank universe numbers, the latest number of states that have implemented regulations similar to the ones in the proposed rule. This task includes revising the cost estimates to reflect updated information regarding airport hydrant fuel systems (e.g., construction costs), field-constructed tanks, and wastewater treatment tanks.

Before initiating work under this Task, the contractor shall schedule and participate in a conference call with the COR and/or other EPA staff to discuss the scenarios and baselines the contractor will use to complete this Task. The contractor shall budget for weekly conference calls with the COR and other EPA staff to provide regular progress updates.

#### Deliverable(s) and Schedule:

The deliverable under will consist of one draft and one final document. These documents shall be in memo format and include all necessary supporting tables, charts, and graphics to ensure full reader clarity.

The deliverable shall summarize the cost impacts associated with the revisions to the proposed rule and potential regulatory scenarios and baselines. The deliverable shall contain text, tables, flowcharts, and graphics, as appropriate to enhance presentation clarity. This deliverable shall also identify anticipated data needs, likely sources, and quality control procedures to be applied to the data.

The contractor shall also submit associated electronic files supporting the results presented in the summary.

The draft deliverable shall be due to the COR no later than thirty (30) calendar days following receipt of the Work Assignment, including all necessary supporting information. The final document shall address all written COR comments on the draft and be due to the COR no later than seven (7) calendar days following contractor receipt of all written COR comments on the draft. Upon request from the COR, the contractor shall provide interim deliverables to demonstrate progress on this task.

### Task 3.           Assessment of Benefits Associated With Revisions to Proposed Rule

**Subtask 3A.** Under Subtask 3A, the contractor shall assist EPA in assessing the benefits associated with changes to the proposed regulatory revisions. Under work previously conducted under Work Assignment B-3, the contractor contacted four experts to obtain their professional assessments of the number or percentage of releases that would be avoided (e.g., associated with new release prevention requirements) and/or the change in the severity of an average release (e.g., associated with new release detection requirements) that would result from each individual regulatory requirement being considered for the proposed rule, as well as an overall percentage or number of avoided releases and/or an overall reduction in the severity of the releases that may result in aggregate from the full set of proposed rule changes.

Under this Subtask, the contractor shall manage the completion of the assessments and obtain all the necessary supporting information from the experts. The contractor shall approach the experts with follow-up questions and scenarios to clarify their responses and understanding of the questions. The contractor shall obtain from each expert all information and rationale used to derive his/her estimates.

The contractor shall review and organize the expert assessments for overall content and appropriateness of responses, and clearly document all communications. The contractor shall develop the necessary quality assurance procedures to ensure that the answers provided by the experts are clearly documented and verified. The contractor shall submit a separate report (from each expert contacted) that summarizes the expert's best professional judgments regarding avoided releases and reduced severity associated with the regulatory changes under consideration.

**Subtask 3B.** Based on the responses received from the experts, the contractor shall analyze the results to update EPA's current estimates of benefits associated with the proposed regulatory changes, and generate revised total estimates of avoided cleanup cost and other associated benefits (e.g., avoided product loss, avoided human health) based on each of the expert's responses. The contractor shall submit a memorandum summarizing the methodology, results, and limitations used to estimate the benefits of the proposed regulatory changes.

As part this Subtask, the contractor shall also assess, qualitatively and, where possible, quantitatively, any additional benefits that could result from the proposed regulatory requirements. Such benefits could include, but are not limited to, protection of groundwater from contamination, reductions to human health, reductions in insurance premiums, reductions in product loss, and effects on property value.

#### Deliverable(s) and Schedule:

**Subtask3A: Summary Results from Experts.** The contractor shall submit a separate report (using Microsoft Word and/or Excel) from each expert contacted summarizing their best professional

judgments regarding avoided releases and reduced severity associated with the proposed regulatory changes under consideration.

The draft report deliverables shall be due to the COR no later than thirty (30) calendar days following receipt of the Work Assignment, including all necessary supporting information. The final document shall address all written COR comments on the draft and be due to the COR no later than seven (7) calendar days following contractor receipt of all written COR comments on the draft. Upon request from the COR, the contractor shall provide interim deliverables to demonstrate progress on this subtask.

**Subtask 3B: Summary of Benefits.** The contractor shall submit a summary (using Microsoft Word and/or Excel) of the benefit estimates of the proposed regulatory revisions.

The draft report deliverables shall be due to the COR no later than forty-five (45) calendar days following receipt of the Work Assignment, including all necessary supporting information. The final document shall address all written COR comments on the draft and be due to the COR no later than seven (7) calendar days following contractor receipt of all written COR comments on the draft. Upon request from the COR, the contractor shall provide interim deliverables to demonstrate progress on this subtask.

#### Task 4.           Revisions of Regulatory Impact Assessment (RIA) Document

Building upon the regulatory impact assessment (RIA) document prepared for the proposed rule, the contractor shall prepare the regulatory impact assessment (RIA) document for the final rule by revising the RIA to incorporate the results from Tasks 2 and 3 of this Work Assignment. In addition, the contractor shall assess the economic and distributional impacts of the regulatory revisions. The contractor shall also assess small business impacts, energy output impacts, employment impacts, unfunded mandates, and impacts associated with other relevant executive orders (e.g., impacts on minority and low-income populations, tribal impacts, and children's health impacts).

The RIA document shall include, but is not limited to, the following: table of contents, executive summary, introduction and discussion of regulatory package, need for regulation, assessment of non-regulatory and of regulatory approaches/options, discussion of the analytic approach (methodology), baseline conditions (regulatory, economic, etc.), alternative baselines, compliance and social costs, sensitivity analyses, economic and distributional impacts (employment, prices, profits, etc.), impacts to small entities, unfunded mandates, relevant executive orders (e.g., environmental justice, tribal impacts, children's health, energy impacts), limitations of analyses, and references.

#### Deliverable(s) and Schedule:

All deliverables under this Task shall be initiated through a Technical Directive (TD). The deliverables for this Task shall be the complete regulatory analysis document, including all necessary supporting tables, figures, appendices, and analyses, and a document summarizing how the contractor responded to all the comments received. The deliverables for this task shall consist of draft and final documents. The documents shall be in memo format and include all necessary supporting charts and graphics to ensure full reader clarity. The contractor shall submit the RIA in both Microsoft Word (.docx) and Adobe Acrobat (.pdf) formats. All supporting analyses used to generate the results in the RIA shall be submitted in electronic format.

The draft report deliverables shall be due to the COR no later than sixty (60) calendar days following receipt of the TD from the COR, including all necessary supporting information. The final

document shall address all written COR comments on the draft and be due to the COR no later than seven (7) calendar days following contractor receipt of all written COR comments on the draft. Upon request from the COR, the contractor shall provide interim deliverables to demonstrate progress on this subtask.

<b>SCHEDULE OF DELIVERABLES</b>		
<b>TASK NUMBER and DELIVERABLE</b>	<b>WORK ASSIGNMENT DUE DATES</b>	
	<b>DRAFT</b>	<b>FINAL</b>
<b>Task 1: Work Plan</b>		
Work Plan and Budget	See final	20 calendar days from WA receipt
Monthly Progress Reports	See final	As required
<b>Task 2: Assessment of Baselines, Universes, and Cost Impacts Associated with Revisions to Proposed Rule</b>	Thirty days (30) calendar days following contractor receipt of Work Assignment	No later than seven (7) calendar days following contractor receipt of all written COR comments.
<b>Task 3: Assessment of Benefits Associated with Revisions to Proposed Rule</b>	<b>Subtask 3A:</b> Thirty (30) calendar days following contractor receipt of Work Assignment  <b>Subtask 3B:</b> Forty-five (45) calendar days following contractor receipt of Work Assignment	<b>Subtask 3A:</b> No later than seven (7) calendar days following contractor receipt of all written COR comments.  <b>Subtask 3B:</b> No later than seven (7) calendar days following contractor receipt of all written COR comments.
<b>Task 4: Revisions of Regulatory Impact Assessment (RIA) Document</b>	Sixty (60) calendar days following receipt of TD	No later than seven (7) calendar days following contractor receipt of all written COR comments.

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-3				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number    1			Analytical Support for OUST				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: The purpose of this amendment is to approve the contractor's work plan/cost estimate dated 06/06/2013 with a LOE of 603 hours and \$59,750.06 (b)(4) cost (b)(4) fee).										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO (Max 2)    22										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE:		585		
04/30/2012   To   04/29/2014										
This Action:								18		
Total:								603		
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name    ChoYi Kwan						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number    703-347-8908				
						FAX Number:				
Project Officer Name    Shannon Sturgeon						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:    703-605-0509				
						FAX Number:    703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name    Christie Deskiewicz						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:    202-564-3316				
						FAX Number:				

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-3				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000002				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number      1			OUST Final Rulemaking				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: The purpose of this amendment is to add an additional LOE of 156 hours in order to continue work under Tasks 2 through 4. The new total LOE is now 759 hours. The statement of work is attached. The contractor shall submit a work plan/cost estimate reflecting the additional work.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO      22 (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 603				
04/30/2012 To 04/29/2014										
This Action:						156				
Total:						759				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name    ChoYi Kwan						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number    703-347-8908				
						FAX Number:				
Project Officer Name    Shannon Sturgeon						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 703-605-0509				
						FAX Number: 703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name    Eulvid Rocque						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 202-564-8316				
						FAX Number:				



## **EPA CONTRACT NUMBER EP-W-12-013**

### **Statement of Work**

Work Assignment Number: 1-3

Work Assignment Amendment Number: 2

Title: Analytical Support for Office of Underground Storage Tank (OUST) Final Rulemaking

Contracting Officer Representative (COR): Cho Yi Kwan

Address: RPD/OUST  
Mail Code 5402P  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

Telephone: (703) 347-8908  
(703) 603-9900 (front office)  
(703) 308-0509 (FAX)

Alternate Contracting Officer Representative (COR): Elizabeth McDermott

Address: Same as above

Telephone: (703) 603-7175

### **BACKGROUND**

In 1984, Congress responded to the increasing threat to groundwater posed by leaking underground storage tanks (LUSTs) by adding Subtitle I to the Resource Conservation and Recovery Act (RCRA). Subtitle I required EPA to develop a comprehensive regulatory program for underground storage tanks (USTs) storing petroleum or certain hazardous substances. In 1988, EPA issued UST regulations covering three sections: technical requirements, financial responsibility requirements, and state program approval objectives (see 40 CFR Parts 280 and 281).

EPA published the proposed rule “Revisions to Existing Requirements and New Requirements for Secondary Containment and Operating” in the Federal Register in November 18, 2011 (<http://www.gpo.gov/fdsys/pkg/FR-2011-11-18/pdf/2011-29293.pdf>). The public comment period for the proposed rule ended April 16, 2012. EPA is currently planning to finalize its proposed revisions to the existing UST regulations.

### **PURPOSE AND SCOPE OF THIS WORK ASSIGNMENT AMENDMENT:**

The purpose of this Work Assignment Amendment is to provide for additional analytical support related to costs, benefits, economic impacts, and technical analyses necessary to appropriately assess potential regulatory options related to the existing OUST program.

## **WORK STATEMENT:**

### Task 1. Work Plan, Progress Reports and Budget

Within twenty (20) days of receipt of this Work Assignment Amendment, the contractor shall deliver a work plan. This plan shall include a proposed level of effort, budget, schedule of tasks, and schedule of deliverables. A cost proposal shall accompany this work plan. The contractor shall not budget for any more travel under this Amendment than was previously approved. The contractor shall budget for weekly conference calls with the COR and other EPA staff to provide regular progress updates.

#### Deliverable(s) and Schedule:

Work Plan and Budget within allotted time frame identified above.

### Task 4. Revisions of Regulatory Impact Assessment (RIA) Document

Building upon the regulatory impact assessment (RIA) document prepared and submitted by the contractor in December 2013, the contractor shall revise the RIA to incorporate further adjustments to the costs and benefits analysis (e.g., changes in the underlying assumptions used) based on internal review from OUST and other EPA offices. These reviews are occurring during January and early February 2014. In order to revise the RIA, the contractor shall make the necessary changes to the analyses done in Tasks 2 and 3 to reflect any changes made to the underlying assumptions and calculations.

In addition, under this Work Assignment Amendment, the contractor will revise the RIA to respond to comments from other EPA offices – specifically, from the Office of Policy. Comments are expected to be provided to the COR by the end of January or early February.

The RIA document shall include, but is not limited to, the following: table of contents, executive summary, introduction and discussion of regulatory package, need for regulation, assessment of non-regulatory and of regulatory approaches/options, discussion of the analytic approach (methodology), baseline conditions (regulatory, economic, etc.), alternative baselines, compliance and social costs, sensitivity analyses, economic and distributional impacts (employment, prices, profits, etc.), impacts to small entities, unfunded mandates, relevant executive orders (e.g., environmental justice, tribal impacts, children's health, energy impacts), limitations of analyses, and references.

#### Deliverable(s) and Schedule:

The deliverables for this Task shall be the complete regulatory analysis document, including all necessary supporting tables, figures, appendices, and analyses, and a document summarizing how the contractor responded to all the comments received. The deliverables for this task shall consist of draft and final documents. The documents shall be in memo format and include all necessary supporting charts and graphics to ensure full reader clarity. The contractor shall submit the RIA in both Microsoft Word (.docx) and Adobe Acrobat (.pdf) formats. All supporting analyses used to generate the results in the RIA shall be submitted in electronic format.

The draft report deliverables shall be due to the COR no later than February 28, 2014, including all necessary supporting information. The final document shall address all written COR comments on the draft and be due to the COR no later than seven (7) calendar days following contractor receipt of all written COR comments on the draft or April 29, 2014, whichever is earlier. Upon request from the COR, the contractor shall provide interim deliverables to demonstrate progress on this subtask.

<b>SCHEDULE OF DELIVERABLES</b>		
<b>TASK NUMBER and DELIVERABLE</b>	<b>WORK ASSIGNMENT DUE DATES</b>	
	<b>DRAFT</b>	<b>FINAL</b>
<b>Task 1: Work Plan</b>		
Work Plan and Budget	See final	20 calendar days from WA receipt
Monthly Progress Reports	See final	As required
<b>Task 4: Revisions of Regulatory Impact Assessment (RIA) Document</b>	No later than February 28, 2014	No later than seven (7) calendar days following contractor receipt of all written COR comments or April 29, 2014, whichever is earlier.

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-3				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000003				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014 Base                      Option Period Number    1			Title of Work Assignment/SF Site Name WA 1-3 OUST Final Rulemaking				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From   04/30/2013   To   04/29/2014				
Comments: The purpose of this amendment is to approve the contractor's work plan/cost estimate dated 02/11/14 with a LOE of 156 hours and \$14,277.94 (b)(4) cost (b)(4) fee) Total LOE is now 759 hours.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO (Max 2)    22										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE: 759						
04/30/2012 To 04/29/2014										
This Action:				0						
Total:				759						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:			LOE:			
Cumulative Approved:				Cost/Fee:			LOE:			
Work Assignment Manager Name    ChoYi Kwan							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number    703-347-8908			
							FAX Number:			
Project Officer Name    Shannon Sturgeon							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 703-605-0509			
							FAX Number: 703-308-7903			
Other Agency Official Name							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number:			
							FAX Number:			
Contracting Official Name    Eulvid Rocque							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 202-564-8316			
							FAX Number:			

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-4				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014 Base                      Option Period Number    1			Title of Work Assignment/SF Site Name Pharmaceuticals RIA				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From   04/30/2013   To   04/29/2014				
Comments: This action is to initiate WA 1-4 titled "Preparation of Regulatory Impact Analysis for Pharmaceuticals, and Related Work" with an LOE of 210 hrs. Rachel Alford is appointed as the WAM. Scott Palmer is appointed as the alt. WAM. The Statement of work is attached. The contractor shall submit a work plan/cost estimate.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <span style="border: 1px solid black; padding: 2px;">22</span> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
04/30/2012 To 04/29/2014										
This Action:						210				
Total:						210				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Rachel Alford						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number   703-305-0894				
						FAX Number:				
Project Officer Name   Shannon Sturgeon						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 703-605-0509				
						FAX Number: 703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name   Christie Deskiewicz						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 202-564-3316				
						FAX Number:				

## Statement of Work

=====

Work Assignment Number: 1-4

Title: Preparation of Regulatory Impact Analysis for Pharmaceuticals, and Related Work

Contracting Officer's Representative (COR): Rachel Alford

Alternate COR: Scott Palmer

Address: OSWER/ORCR/ERAS  
Mail Code: 5305P  
1200 Pennsylvania Ave., NW  
Washington, D.C. 20460

Telephone: (703) 305-0894  
(703) 308-8895 (front office)  
(703) 308-7903 (FAX)

### **BACKGROUND:**

The fundamental goals of the Resource Conservation and Recovery Act (RCRA) are to protect human health and the environment from the hazards of waste disposal, to conserve energy and natural resources, to reduce the amount of waste generated, and to ensure wastes are managed in an environmentally sound manner. As a result, RCRA was designed to be a "cradle to grave" approach for waste management, and this approach has prescribed regulatory requirements for the generation, transportation, and the storage, treatment and disposal of hazardous wastes. A waste meets the definition of hazardous under RCRA if it is specifically listed on one of the four lists of RCRA hazardous waste (F-, K-, P- or U-lists), or if the waste exhibits one of the four characteristics of a RCRA hazardous waste (ignitability, corrosivity, reactivity or toxicity).

A small portion of pharmaceuticals are regulated as hazardous waste under RCRA when they are disposed. Healthcare (and associated) facilities that generate hazardous waste pharmaceuticals have had a difficult time in complying with the industry-oriented framework of the RCRA hazardous waste regulations for a number of reasons. First, healthcare workers are typically unfamiliar with the hazardous waste regulations as their primary focus is to provide healthcare to their patients; however, under the current regulatory scheme, healthcare workers are a major factor in the implementation of the regulations. Second, a healthcare facility can have thousands of items in its formulary and may find it difficult to ascertain which ones are hazardous wastes

when disposed. Third, some pharmaceuticals are listed as acute hazardous wastes, which are stringently regulated even in small amounts. As a result, healthcare facilities are often required to comply with the most stringent aspects of the hazardous waste regulations. Due to these reasons, the Agency is concerned that the sewerage of pharmaceuticals is a waste management option chosen by facilities in order to circumvent regulations that are incompatible with the operations and structure of healthcare (and associated) facilities. If not sewerage, the Agency is concerned that hazardous waste pharmaceuticals are not being safely and properly transported and disposed. Lastly, a major mechanism used by healthcare facilities for the management of unused and/or expired pharmaceuticals, reverse distribution, is not recognized under the current regulatory scheme.

In December 2008, EPA proposed to add hazardous pharmaceutical wastes to the current federal Universal Waste (UW) Program. The UW Program is a set of simplified hazardous waste management standards for a small group of hazardous wastes which currently include batteries, pesticides, lamps and mercury-containing equipment. UWs are typically low-risk during accumulation and transport and are generated in a variety of settings other than the industrial setting (e.g., retail stores, office buildings households). EPA believed that adding hazardous waste pharmaceuticals to the UW program would have simplified the management of hazardous waste pharmaceuticals for the health care industry while encouraging proper disposal of hazardous waste pharmaceuticals. However, based on the public comments received on the proposal, particularly comments raising concerns over the diversion of such wastes due to the lack of notification and manifest requirements under the universal waste program, EPA has decided that the Universal Waste Rule is not the appropriate regulatory approach to address the management of hazardous waste pharmaceuticals. Therefore EPA is working on a new Proposed Pharmaceuticals Rule that will be under a different, more comprehensive regulatory approach.

The EPA has collected data on the amount of pharmaceuticals generated at different facilities, as well as completed a draft Regulatory Impact Analysis under contract XXX..

## **PURPOSE AND SCOPE OF THIS WORK STATEMENT:**

The purpose of the Statement of Work is to provide for all analytical assessment needs related to costs, economic impacts, benefits, document preparation, and related technical and supporting analyses necessary to support the Agency's promulgation of the proposed rule: Pharmaceuticals ORCR Rule. The scope of the Statement of Work includes refinement of cost-benefit analysis based on workgroup, OP and OMB review, and assistance to the COR to respond to analytical comments and questions from the Office of Policy (OP) and Office of Management Budget (OMB). The contractor shall make the best use possible of the Regulatory Impact Analysis (RIA) also known as a Economic Analysis (EA)<sup>1</sup> completed on January 15, 2013 prepared for the proposed rule dated. The contractor shall duplicate work done under previous Work Assignments.

### **Task 1:        Submit Work Plan & Budget**

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<sup>1</sup> The RIA is a required cost and benefit analysis document for EPA's regulations.

The contractor shall supply the COR with a proposed work plan, deliverables schedule, and cost estimate for completing the Tasks described in this SOW. For each of the Tasks in this SOW which involves “environmental data” --- as defined according to EPA’s mandatory quality management system<sup>2</sup> --- the Contractor shall describe in the work plan, how the Contractor plans to apply quality assurance (QA), and indicate in the work plan that the Contractor shall include a brief (e.g., one paragraph or less) summary of QA activities in the monthly progress/invoice reports to the WAM for this work assignment. Because the types of “environmental data” involved in this SOW may mostly come from existing secondary sources which have already been subject to QA (e.g., peer-reviewed journals, and other Federal agencies such as the Energy Information Administration, the Census Bureau, and the Bureau of Labor Statistics), the QA activities for this SOW may only require the Contractor to (a) examine data, calculations, and calculation results (e.g., evaluate numerical outliers), and (b) double-check spreadsheet calculation formulae.

#### **Task 1 Deliverable:**

Proposed work plan, deliverables schedule, and cost estimate (budget).

#### **Task 2: Respond to OP and OMB Comments and Revise the RIA**

The contractor shall respond to workgroup, OP and OMB comments and revise the RIA based on direction from the WAM. The contractor shall if asked assist with briefing presentations and make editorial and numerical changes to the RIA based on OP and OMB comments. The contractor shall assist with the finalization of the January 15, 2013 draft RIA entitled Regulatory Impact Analysis for EPA’s proposed Healthcare Facility-specific Regulations for the Management of Hazardous Waste Pharmaceuticals.

#### **Task 2: Deliverable**

The deliverable under this Task shall be draft and final versions of the completed RIA. The draft deliverable shall be due within 10 working days from COR receipt of the final deliverable (TD or otherwise) under Task 2. The final deliverable shall be due no later than five working days following contractor receipt of all written COR comments on the draft.

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<sup>2</sup>

Additional information about EPA’s quality management system is available at <http://www.epa.gov/quality/>



<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-4				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number      1			RIA for Pharmaceuticals				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: The purpose of the attached amendment is to approve the contractor's work plan/cost estimate dated May 20, 2013 for a LOE of 210 hours and \$19,951.49 (b)(4) cost (b)(4) fee).										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO (Max 2)    22										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 210				
04/30/2012   To   04/29/2014										
This Action:						0				
Total:						210				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Rachel Alford						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number   703-305-0894				
						FAX Number:				
Project Officer Name   Shannon Sturgeon						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 703-605-0509				
						FAX Number: 703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name   Christie Deskiewicz						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 202-564-3316				
						FAX Number:				

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-4				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000002				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number      1			Pharma WA 1-4 Amd. 2				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: The purpose of this amendment is to add an additional LOE of 270 hours, for addition support in task 2. The statement of work is attached. The contractor shall submit a work plan/cost estimate.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations date use EPA Form 1900-69A.										
SFO (Max 2) <span style="border: 1px solid black; padding: 2px;">22</span>										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
04/30/2012 To 04/29/2014										
This Action:						480				
Total:						480				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Rachel Alford						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number   703-305-0894				
						FAX Number:				
Project Officer Name   Shannon Sturgeon						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 703-605-0509				
						FAX Number: 703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name   Eulvid Rocque						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 202-564-8316				
						FAX Number:				

## Statement of Work

=====

Work Assignment Number: 1-4 Amd.2

Title: Preparation of Regulatory Impact Analysis for Pharmaceuticals, and Related Work

Contracting Officer's Representative (COR): Rachel Alford

Alternate COR: Scott Palmer

Address: OSWER/ORCR/ERAS  
Mail Code: 5305P  
1200 Pennsylvania Ave., NW  
Washington, D.C. 20460

Telephone: (703) 305-0894  
(703) 308-8895 (front office)  
(703) 308-7903 (FAX)

### **BACKGROUND:**

The fundamental goals of the Resource Conservation and Recovery Act (RCRA) are to protect human health and the environment from the hazards of waste disposal, to conserve energy and natural resources, to reduce the amount of waste generated, and to ensure wastes are managed in an environmentally sound manner. As a result, RCRA was designed to be a "cradle to grave" approach for waste management, and this approach has prescribed regulatory requirements for the generation, transportation, and the storage, treatment and disposal of hazardous wastes. A waste meets the definition of hazardous under RCRA if it is specifically listed on one of the four lists of RCRA hazardous waste (F-, K-, P- or U-lists), or if the waste exhibits one of the four characteristics of a RCRA hazardous waste (ignitability, corrosivity, reactivity or toxicity).

A small portion of pharmaceuticals are regulated as hazardous waste under RCRA when they are disposed. Healthcare (and associated) facilities that generate hazardous waste pharmaceuticals have had a difficult time in complying with the industry-oriented framework of the RCRA hazardous waste regulations for a number of reasons. First, healthcare workers are typically unfamiliar with the hazardous waste regulations as their primary focus is to provide healthcare to their patients; however, under the current regulatory scheme, healthcare workers are a major factor in the implementation of the regulations. Second, a healthcare facility can have thousands of items in its formulary and may find it difficult to ascertain which ones are hazardous wastes

when disposed. Third, some pharmaceuticals are listed as acute hazardous wastes, which are stringently regulated even in small amounts. As a result, healthcare facilities are often required to comply with the most stringent aspects of the hazardous waste regulations. Due to these reasons, the Agency is concerned that the sewerage of pharmaceuticals is a waste management option chosen by facilities in order to circumvent regulations that are incompatible with the operations and structure of healthcare (and associated) facilities. If not sewerage, the Agency is concerned that hazardous waste pharmaceuticals are not being safely and properly transported and disposed. Lastly, a major mechanism used by healthcare facilities for the management of unused and/or expired pharmaceuticals, reverse distribution, is not recognized under the current regulatory scheme.

In December 2008, EPA proposed to add hazardous pharmaceutical wastes to the current federal Universal Waste (UW) Program. The UW Program is a set of simplified hazardous waste management standards for a small group of hazardous wastes which currently include batteries, pesticides, lamps and mercury-containing equipment. UWs are typically low-risk during accumulation and transport and are generated in a variety of settings other than the industrial setting (e.g., retail stores, office buildings households). EPA believed that adding hazardous waste pharmaceuticals to the UW program would have simplified the management of hazardous waste pharmaceuticals for the health care industry while encouraging proper disposal of hazardous waste pharmaceuticals. However, based on the public comments received on the proposal, particularly comments raising concerns over the diversion of such wastes due to the lack of notification and manifest requirements under the universal waste program, EPA has decided that the Universal Waste Rule is not the appropriate regulatory approach to address the management of hazardous waste pharmaceuticals. Therefore EPA is working on a new Proposed Pharmaceuticals Rule that will be under a different, more comprehensive regulatory approach.

The EPA has collected data on the amount of pharmaceuticals generated at different facilities, as well as completed a draft Regulatory Impact Analysis.

## **PURPOSE AND SCOPE OF THIS WORK STATEMENT:**

The purpose of the Statement of Work is to provide for all analytical assessment needs related to costs, economic impacts, benefits, document preparation, and related technical and supporting analyses necessary to support the Agency's promulgation of the proposed rule: Pharmaceuticals ORCR Rule. The scope of the Statement of Work includes refinement of cost-benefit analysis based on workgroup, OP and OMB review, and assistance to the COR to respond to analytical comments and questions from the Office of Policy (OP) and Office of Management Budget (OMB). The contractor shall make the best use possible of the Regulatory Impact Analysis (RIA) also known as a Economic Analysis (EA)<sup>1</sup> completed on January 15, 2013 prepared for the proposed rule dated. The contractor shall not duplicate work done under previous Work Assignments.

### **Task 1: Submit Work Plan & Budget**

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<sup>1</sup> The RIA is a required cost and benefit analysis document for EPA's regulations.

The contractor shall supply the COR with a proposed work plan, deliverables schedule, and cost estimate for completing the Tasks described in this SOW. For each of the Tasks in this SOW which involves “environmental data” --- as defined according to EPA’s mandatory quality management system<sup>2</sup> --- the Contractor shall describe in the work plan, how the Contractor plans to apply quality assurance (QA), and indicate in the work plan that the Contractor shall include a brief (e.g., one paragraph or less) summary of QA activities in the monthly progress/invoice reports to the WAM for this work assignment. Because the types of “environmental data” involved in this SOW may mostly come from existing secondary sources which have already been subject to QA (e.g., peer-reviewed journals, and other Federal agencies such as the Energy Information Administration, the Census Bureau, and the Bureau of Labor Statistics), the QA activities for this SOW may only require the Contractor to (a) examine data, calculations, and calculation results (e.g., evaluate numerical outliers), and (b) double-check spreadsheet calculation formulae.

#### **Task 1 Deliverable:**

Proposed work plan, deliverables schedule, and cost estimate (budget).

#### **Task 2: Respond to OP and OMB Comments and Revise the RIA**

The contractor shall respond to workgroup, OP and OMB comments and revise the RIA based on direction from the WAM. The contractor shall if asked assist with briefing presentations and make editorial and numerical changes to the RIA based on OP and OMB comments. The contractor shall assist with the finalization of the August 2013 draft RIA entitled Regulatory Impact Analysis for EPA’s proposed Healthcare Facility-specific Regulations for the Management of Hazardous Waste Pharmaceuticals. The contractor shall revise the RIA in response to workgroup, WAM, OP and OMB comments. There may be editorial comments as well as a need for revisions to the methodology and/or numbers in the RIA. Occasionally OMB and/or OP requests additional sensitivity analysis. There is a possibility that this rule may be deemed less stringent than RCRA in such case the contractor will work to revise the RIA to account for the rule being less stringent in the baseline as well as incremental costs. The WAM will let the contractor know if the rule is more or less stringent than RCRA. A decision on stringency may happen within the next couple of months.

#### **Task 2: Deliverable**

The deliverable under this Task shall be draft and final versions of the completed RIA. The draft deliverable shall be due within 10 working days from COR receipt of the final deliverable (TD or otherwise) under Task 2. The final deliverable shall be due no later than five working days following contractor receipt of all written COR comments on the draft.

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<sup>2</sup>

Additional information about EPA’s quality management system is available at <http://www.epa.gov/quality/>

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-4				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000003				
Contract Number EP-W-12-013			Contract Period 04/30/2012 To 04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number    1			Prep of RIA				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From 04/30/2013 To 04/29/2014					
Comments: The purpose of this amendment is to approve the contractor's work plan/cost estimate dated September 25, 2013 for a LOE of 270 hours and \$25,019.65 (b)(4) cost (b)(4) fee).										
<input type="checkbox"/> Superfund					Accounting and Appropriations Data					<input checked="" type="checkbox"/> Non-Superfund
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO (Max 2)    22										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 480				
04/30/2012 To 04/29/2014										
This Action:						0				
Total:						480				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name Rachel Alford						Branch/Mail Code:				
						Phone Number 703-305-0894				
(Signature) _____ (Date) _____						FAX Number:				
Project Officer Name Shannon Sturgeon						Branch/Mail Code:				
						Phone Number: 703-605-0509				
(Signature) _____ (Date) _____						FAX Number: 703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
						Phone Number:				
(Signature) _____ (Date) _____						FAX Number:				
Contracting Official Name Eulvid Rocque						Branch/Mail Code:				
						Phone Number: 202-564-8316				
(Signature) _____ (Date) _____						FAX Number:				

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-5				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014 Base                      Option Period Number    1			Title of Work Assignment/SF Site Name Finalize RIA for DSW				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From   04/30/2013   To   04/29/2014				
Comments: This action is to initiate WA 1-5 titled "Finalize RIA for DSW rule" with an LOE of 428 hrs. Mark Eads is appointed as the WAM. The statement of work is attached. The contractor shall submit a work plan/cost estimate.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <span style="border: 1px solid black; padding: 2px;">22</span> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
04/30/2012 To 04/29/2014										
This Action:						428				
Total:						428				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Mark Eads  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number   703-308-8615 FAX Number:				
Project Officer Name   Shannon Sturgeon  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 703-605-0509 FAX Number: 703-308-7903				
Other Agency Official Name  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: FAX Number:				
Contracting Official Name   Christie Deskiewicz  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-3316 FAX Number:				

## Statement of Work

13 May 2013

Project Title: Finalize the Regulatory Impact Analysis (RIA) for EPA's 2013 Definition of Solid Waste (DSW) Final Rule  
Contract No.: EP-W-12-013 (Industrial Economics Inc.)  
Work Assignment No.: 1-05  
Work Assignment Manager (COTR): Mark Eads, Economist  
EPA Office of Resource Conservation & Recovery (ORCR)  
703-308-8615  
Period of performance: CO signature to April 29, 2014

### I. Introduction

EPA's 2008 "*Definition of Solid Waste*" (DSW) final rule added three additional exclusions from RCRA Subtitle C hazardous waste regulation for industrial hazardous waste recycling:

1. Generator-controlled recycling exclusion
2. Tolling agreement recycling exclusion
3. Offsite transfer recycling exclusion

Under these DSW exclusions, industrial wastes are no longer regulated by EPA as either RCRA hazardous wastes or solid wastes, but are classified as "*hazardous secondary materials*."

Based on the outcome of EPA's June 2009 public meeting<sup>1</sup> concerning RCRA stakeholder concerns about EPA's October 2008 DSW final rule,<sup>2</sup> in July 2011 EPA proposed revisions to the 2008 DSW final rule. EPA planned to finalize the 2011 proposed revisions in the form of a final rule no later than December 31, 2012. The purpose of the 2011 proposed revisions and the planned December 2012 DSW final rule, was to revise the 2008 DSW rule to address stakeholder concerns that some elements of the 2008 DSW rule (in particular its "offsite transfer" recycling exclusion) are not fully protective of human health or the environment.

In the almost 4.5 years since its early 2009 effective date, only a small set of state governments have adopted the 2008 DSW final rule, which as of April 2013 total only 5 states plus 2 territories (ID, IL, IA, NJ, PA, PR, and USVI), involving only a small set of 79 facilities operating under the 2008 DSW exclusions).<sup>3</sup>

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<sup>1</sup> Background information about EPA's June 2009 public meeting is available on EPA's website at <http://www.epa.gov/waste/hazard/dsw/rulemaking.htm#2009>

<sup>2</sup> Background information about EPA's October 2008 DSW final rule is available on EPA's website at <http://www.epa.gov/waste/hazard/dsw/rulemaking.htm#2008>

<sup>3</sup> The 79 facilities operating under the 2008 DSW final rule exclusions, and the 5 states and 2 territories, are identified on EPA's 2008 DSW notifications registry at <http://www.epa.gov/epawaste/hazard/dsw/notify-sum.pdf>



## II. Purpose of this Work Assignment

The purpose of this work assignment is for the Contractor to continue providing analytic support to EPA for finalizing a “*Regulatory Impact Analysis*” (RIA) for EPA’s upcoming DSW final rule, which EPA now expects to publish in 2013, pending OMB review and approval. This Statement of Work (SOW) falls under the scope of Task 2 “*Regulatory Assessment: Costs Benefits, Economic and other Impacts*” within EPA contract EP-W-12-013.

This work assignment builds upon and continues the Contractor’s prior work performed for EPA during the base year April 30, 2012 to April 29, 2013 under contract EP-W-12-013 work assignment B-05. Under the prior B-05 work assignment the Contractor developed a September 2012 draft RIA document (260 pages) for EPA’s planned December 2012 DSW final rule. When the COTR formulated work assignment B-05, EPA was planning to complete the DSW final rule no later than December 31, 2012.<sup>4</sup>

However, as of the date of this SOW, EPA’s 2012 DSW final rule schedule has been delayed at least four months (i.e., January to April 2013), because OMB has refused to review EPA’s draft of the 2012 DSW final rule. Because of this delay, the Contractor was only able to perform about 61% of work assignment B-05. Therefore, this work assignment 1-05 continues the Contractor’s work not completed under B-05.

## III. Work Tasks

This SOW contains the following work tasks associated with the Contractor providing ORCR assistance and support for finalizing the September 2012 draft RIA for the 2013 DSW final rule:

- Task 1: Submit workplan and budget.
- Task 2: Assist ORCR with responding to EPA management, EPA FAR workgroup, EPA Office of Policy, and/or OMB review comments on the September 2012 draft RIA

### **Task 1: Submit Workplan & Budget**

Supply ORCR with a proposed workplan, deliverables schedule, and cost for completing the Tasks described in this SOW. For each of the Tasks in this SOW which involve “environmental data” --- as defined according to EPA’s mandatory quality management system --- the Contractor shall describe in the Workplan, how the Contractor plans to apply quality assurance (QA), and indicate in the Workplan that the Contractor shall include a brief (e.g., one paragraph or less) summary of QA activities in the monthly work assignment progress/invoice reports to the COTR. Because the environmental data involved in this SOW may mostly come from existing secondary sources which have already been subject to QA, the QA activities for this SOW may only need to involve the Contractor (a) examining data calculation results (e.g., evaluate

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<sup>4</sup> The December 31, 2012 date represents the deadline for EPA Administrator signature of 2012 DSW final rule established by court settlement agreement between EPA and the Sierra Club.

numerical outliers), and (b) double-checking spreadsheet calculations (e.g., using “check-sum” for key computation cells).

Task 1 Deliverable(s):

- Workplan with a list of deliverables and corresponding due dates, and budget.

**Task 2: Assist ORCR with Responding to EPA Management, EPA FAR Workgroup, EPA Office of Policy, and/or OMB Review Comments on the September 2012 Draft RIA**

ORCR may receive review comments on the RIA from: (a) EPA management, (b) EPA’s DSW final rule FAR Workgroup, (c) the EPA Office of Policy, as well as (d) from OMB during their respective review periods for the 2013 DSW final rule. The Contractor shall assist ORCR with responding to such review comments, as well as modifying (i.e., revising, recalculating) the September 2012 draft RIA as necessary to be responsive to such comments. However, the count and substance of future review comments are unknown to the COTR as of the date of this SOW. Therefore, the COTR will specify the type of assistance needed from the Contractor to respond to review comments and to revise and finalize the RIA, in one or more **Technical Directives** under this task. For purpose of helping the Contractor to formulate a realistic workplan and budget for this task, the Contractor shall assume the need to assist ORCR with responding to one of each of the following possible review comments on the RIA:

- Sensitivity analyses: Run one or more additional sensitivity analyses for certain key numerical factors applied in the September 2012 draft RIA. This type of analysis might require between one-hour to one-week level of effort.
- Alternative methods/assumptions/data: Integrate alternative methods, assumptions, or data into the numerical calculations of the September 2012 draft RIA. This type of analysis might require between one-hour to a few weeks level of effort, depending upon the extent of cascading effect on the chapters and appendices of the RIA. As of the date of this SOW, the COTR anticipates at least the following three possible revisions to the draft RIA (which could require a few weeks for the Contractor to perform):
  1. Baseline (main case): Assume 31 states/territories adopt the 2008 DSW final rule (the COTR will provide the list of 31; this change is based on ORCR’s March 2013 new analysis that 25 states commented to ORCR in 2007, 2009, and 2011 they do not plan to adopt the 2008 DSW final rule).
  2. 2013 DSW final rule adoption (main case): Assume either (a) all 56 states/territories (100% annual tonnage) adopt the 2013 DSW final rule, (b) 48 states/territories (95% annual tonnage) adopt the 2013 DSW final rule; these are possible options OSWER management identified for ORCR on April 19, 2013.
  3. Update Exhibits 3K and 3J of the RIA with the latest count of state adoption and notification facilities provide on EPA’s 2008 DSW rule registry website.<sup>5</sup>

Note: Thee above three possible revisions would affect the text and numerically cascade through the following sections of the September 2012 draft RIA:

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<sup>5</sup> EPA’s 2008 DSW notifications registry website is at <http://www.epa.gov/epawaste/hazard/dsw/notify-sum.pdf>

- Abstract
- Executive Summary
- Chap. 3 (baseline entities)
- Chap. 4 (baseline costs under 2008 DSW rule)
- Chap. 5 (2013 DSW regulatory costs)
- Chap. 6 (sensitivity analyses)
- Chap. 7 (supplemental analyses)

Task 2 Deliverable(s):

- Deliverable shall constitute a finalized RIA document.

#### IV. Schedule of Deliverables

Deliverables shall be completed according to the dates indicated in the table below. The Contractor shall provide electronic versions of all deliverables via email. The Contractor shall also provide in electronic format to the COTR, any accompanying spreadsheets or databases.

Schedule of Deliverables		
Task	Deliverables	Due Dates
Task 1	Workplan & budget	<ul style="list-style-type: none"> <li>• <u>Draft</u>: According to the terms of contract EP-W-12-013 (i.e., within <b>20 calendar days</b> upon receipt of this SOW).</li> <li>• <u>Final</u>: If revisions to the draft are necessary, provide a final version according to the terms of EP-W-12-013 (i.e., within <b>20 calendar days</b> following receipt of COTR comments on the draft workplan &amp; budget).</li> </ul>
Task 2	Assist ORCR with responding to EPA management, EPA FAR Workgroup, EPA Office of Policy, and/or OMB review comments on the September 2012 draft RIA	<ul style="list-style-type: none"> <li>• <u>Draft</u>: A draft finalized version of the September 2012 draft RIA no later than <b>two months (60 days)</b> after receipt of <b>Technical Directive(s)</b> from the COTR.</li> <li>• <u>Final</u>: The Contractor shall supply a finalized RIA no later than <b>two weeks (14 days)</b> after receipt of COTR review feedback on the draft deliverable.</li> </ul>

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-5				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014 Base                      Option Period Number    1			Title of Work Assignment/SF Site Name RIA for DSW Final Rule				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From   04/30/2013   To   04/29/2014				
Comments: The purpose of this amendment is to approve the contractor's work plan/cost estimate dated June 3, 2013 for a LOE of 428 hours and \$49,234.10 (b)(4) cost (b)(4) fee).										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO (Max 2)    22										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE: 428						
04/30/2012 To 04/29/2014										
This Action:				0						
Total:				428						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:			LOE:			
Cumulative Approved:				Cost/Fee:			LOE:			
Work Assignment Manager Name   Mark Eads							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number   703-308-8615			
							FAX Number:			
Project Officer Name   Shannon Sturgeon							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 703-605-0509			
							FAX Number: 703-308-7903			
Other Agency Official Name   Lee Hofmann							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 703-308-8479			
							FAX Number:			
Contracting Official Name   Christie Deskiewicz							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 202-564-3316			
							FAX Number:			

Work Assignment Form, (WebForms v1.0)

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-5				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000003				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number      1			RIA for DSW Final Rule				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: The purpose of this amendment is to approve the Contractor's workplan dated March 24, 2014. The amended workplan de-scopes WA 1-05 to 219 total hours which equals \$21,634.08 (Cost (b)(4) Fee (b)(4) The new total LOE ceiling is 219 and cost plus fee \$21,634.08. The contract is not allowed to go over this approved ceiling without approval from the Contracting Officer.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO (Max 2)    22                      Note: To report additional accounting and appropriations date use EPA Form 1900-69A.										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 219				
04/30/2012   To   04/29/2014										
This Action:						0				
Total:						219				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Mark Eads						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number   703-308-8615				
						FAX Number:				
Project Officer Name   Shannon Sturgeon						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 703-605-0509				
						FAX Number: 703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name   Eulvid Rocque						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 202-564-8316				
						FAX Number:				

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-6				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number    1			RIA for CCR Regulation				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: This action is to initiate WA 1-6 titled "RIA for CCR regulation" with an LOE of 852 hrs. Mark Eads is appointed as the WAM and Rachel Alford is appointed the Alt. WAM. The statement of work is attached. The contractor shall submit a work plan/cost estimate.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <span style="border: 1px solid black; padding: 2px;">22</span> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
04/30/2012 To 04/29/2014										
This Action:						852				
Total:						852				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Mark Eads						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number   703-308-8615				
						FAX Number:				
Project Officer Name   Shannon Sturgeon						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 703-605-0509				
						FAX Number: 703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name   Christie Deskiewicz						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 202-564-3316				
						FAX Number:				

## Statement of Work

25 April 2013

Project Title: Regulatory Impact Analysis for ORCR's Coal Combustion Residuals Final Rule

Contract No.: EP-W-12-013 (Industrial Economics Inc.)

Work Assignment No: 1-06

Prepared by: Mark Eads, ORCR Economist, 703-308-8615 (COTR)

Rachel Alford, ORCR Program Analyst, 703-305-0894 (Alternate COTR)

US Environmental Protection Agency

Office of Resource Conservation & Recovery (ORCR)

Program Management, Communications & Analysis Division (PMCAO)

1200 Pennsylvania Avenue, NW, Mailstop 5305P

Washington, DC 20460

SOW period: Upon receipt to April 29, 2014

### Purpose & Scope

The purpose of this work assignment is for the Contractor to continue providing analytic support to EPA for finalizing a "Regulatory Impact Analysis" (RIA) for EPA's up-coming Coal Combustion Residual (CCR) final rule which EPA may promulgate in late-2013 or 2014. As it is currently formulated, the CCR final rule would implement RCRA regulation of CCR disposal in landfills and surface impoundments by about 500 coal-fired electric utility plants.

This Statement of Work (SOW) falls under the scope of Task 2 "Regulatory Assessment: Costs Benefits, Economic and other Impacts" within EPA contract EP-W-12-013. This work assignment builds upon and continues the Contractor's prior work performed for EPA during the base year April 30, 2012 to April 29, 2013 under contract EP-W-12-013 work assignment B-06. Under the prior B-06 work assignment the Contractor developed a June 30, 2012 draft RIA document (294 pages) with a separate draft RIA "Appendices" document (586 pages) for EPA's CCR final rule. When the COTR formulated work assignment B-06, ORCR planned on publishing the CCR final rule in the Federal Register by December 2012.

However, because the CCR final rule schedule has been delayed by court litigation stemming from multiple stakeholder lawsuits beginning in April 2012 (which have not yet been resolved as of the date of this SOW), the Contractor was only able to perform about 25% of work assignment B-06. This work assignment 1-06 continues the Contractor's work not completed under Tasks 2 and 3 of B-06, but this work assignment does not include Task 4 of B-06 (which involves coordinating the methods/data of the June 2012 draft RIA for the CCR final rule, with EPA's RIA for the steam electric ELG final rule) because both the (a) details required to perform Task 4 and (b) the steam electric ELG final rule schedule, are too speculative as of this date. Therefore, this SOW contains three tasks.

Task 1: Submit work plan & budget.

Task 2: Finish drafting responses to 1,100 public comments on EPA's RIA for the 2010 CCR proposed rule.

Task 3: Revise the June 2012 draft RIA for the CCR final rule to address:

- Comments provided in one or more **Technical Directive(s)** from the COTR.
- Review comments from EPA's FAR workgroup, EPA's Office of Policy, or OMB during review of the CCR final rule.



## **Task 1: Submit Work Plan & Budget**

Supply EPA with a proposed work plan, deliverables schedule, and cost for completing the Tasks described in this SOW. For each of the Tasks in this SOW which involves “environmental data” --- as defined according to EPA’s mandatory quality management system<sup>1</sup> --- the Contractor shall describe in the work plan, how the Contractor plans to apply quality control (QC), and indicate in the work plan that the Contractor shall include a brief (e.g., one paragraph or less) summary of QC activities in the monthly progress/invoice reports to the COTR for this work assignment. Because the types of “environmental data” involved in this SOW may mostly come from existing secondary sources which have already been subject to QC (e.g., peer-reviewed journals, and other Federal agencies such as the Energy Information Administration, the Census Bureau, and the Bureau of Labor Statistics), the QC activities for this SOW may only require the Contractor to (a) examine data, calculations, and calculation results (e.g., evaluate numerical outliers), and (b) double-check spreadsheet formulae.

### **Task 1 Deliverable:**

- Proposed work plan, deliverables schedule, and cost estimate (budget).

## **Task 2: Finish Drafting Responses to 1,100 Public Comments on EPA’s RIA for the 2010 CCR Proposed Rule**

There are a total of about 410,000 public comments on EPA’s June 2010 CCR proposed rule, of which about 1,100 comments are on EPA’s RIA for the 2010 CCR proposed rule. **Exhibit 1** below lists the seven main topics ORCR used to bracket the 1,100 public comments. Under the base year work assignment B-06, the Contractor began Task 2 and provided the COTR with an initial draft of responses to many, but not all, of the comments on the 2010 RIA. After the Contractor receives under this work assignment, review feedback from the COTR on the Contractor’s initial draft responses, the Contractor shall continue and complete this task.

### **Task 2 Deliverables:**

- MSWord document containing the Contractor’s responses to the 1,100 public comments.

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<sup>1</sup> As listed below, EPA’s mandatory quality management system covers two areas (source: definitions below are from page 8 of EPA’s “Quality Policy” document nr. CIO 2106.0, October 2011). Some of the work tasks of this SOW involve the use (i.e., analysis) of environmental data, but none of the tasks in this SOW involve the use of environmental technology.

- Environmental data: Any measurements or information that describe environmental processes, location, or conditions; ecological or health effects and consequences; or the performance of environmental technology. For EPA, environmental data include information collected directly from measurements, produced from models, and compiled from other sources such as databases or literature.
- Environmental technology: An all-inclusive term used to describe pollution monitoring, measurement and control devices and systems, waste treatment processes and storage facilities, and site remediation technologies and their components that may be utilized to remove pollutants or contaminants from or prevent them from entering the environment.

Additional information about EPA’s quality management system is available at <http://www.epa.gov/quality/>

<b>Exhibit 1</b> <b>Count of Public Comments on the 2010 CCR Proposed Rule RIA</b>		
<b>Bracket Item*</b>	<b>RIA Sub-Topic Categories</b>	<b>Count of Public Comments</b>
9.1	General comments on RIA	12
9.2	Other general comments (e.g., about economic issues)	254
9.3	Regulatory costs	371
9.4	Regulatory environmental & economic benefits	99
9.5	Impacts on CCR beneficial uses	231
9.6	Net benefits	37
9.7	Supplemental analyses	63
Total public comments on the 2010 RIA =		1,067
* Bracket item numbers correspond to ORCR's final version (dated 3/24/2011) of the CommentWorks bracketing outline ORCR used to categorize the 2010 CCR proposed rule public comments into issue areas (i.e., topics and sub-topics categories).		

### **Task 3: Revise the June 30, 2012 Draft RIA for the CCR Final Rule**

The Contractor shall assist ORCR with revising the June 30, 2012 draft RIA for the CCR final rule. Such comments could originate from the following sources:

- Comments provided in one or more **Technical Directive(s)** from the COTR.
- Review comments from EPA's FAR workgroup, EPA's Office of Policy, or OMB during review of the CCR final rule.

As of the date of this SOW, the COTR is not able to identify all such necessary revisions. Therefore, the COTR will provide the Contractor with required revisions in one or more **Technical Directives**. For purpose of helping the Contractor formulate a realistic workplan and budget for Task 3, the Contractor shall assume the following types of revisions (listed in random order below, not by importance or revision magnitude):

- 3A. Evaluate modified technical requirements of the CCR final rule: Revise the June 30, 2012 draft RIA by evaluating additional or modified technical requirements for the final rule regulatory option. As of the date of this revised SOW, some of these requirements are still undergoing ORCR management discussion. The contractor may need to revise the draft RIA if these requirements are different from the approach applied in the June 30, 2012 draft RIA. Technical requirements which may be modified in the CCR final rule include but are not limited to:
  1. Large scale fill: The CCR final rule may regulate (i.e., prohibit) "large scale CCR fill" based on a physical description but not based on quantity (tonnage) threshold.
  2. Site flexibility: The CCR final rule may provide site-by-site flexibility for power plants to implement different approaches/methods for compliance with the (a) impoundment closure requirements such as either dewater the impoundment in lieu of capping the closed impoundment, (b) corrective action, (c) demonstrate their CCR units are safe even though they do not meet the natural water table location restriction, (d) run-on/run-off controls.
  3. Associated wastes: The CCR final rule may also include regulation of "associated wastes" (e.g., boiler cleaning wastes).
  4. Dust control: This requirement may change to include both "Best Management Practices" as well as air quality criteria.

5. MSWLFs: Offsite MSWLFs which receive CCR may have additional requirements above existing 40 CFR 258 regulations placed on them such as (a) additional chemical constituents for groundwater monitoring, and/or (b) additional dust controls.
  6. Storage piles: The final rule may include storage requirements for CCR storage piles (e.g., concrete pads, roofs).
  7. Location standards: The final rule may include an additional certification standard.
  8. Implementation deadline: Section 4005(a) of the RCRA statute allows state governments to extend compliance dates for facilities by 5-years for Subtitle D state waste management plans. Such state allowances would extend the 2018 impoundment closure deadline an additional five years to 2023.
- 3B. Alternative methods/assumptions/data: Integrate alternative methods, assumptions, or data into existing draft RIA numerical calculations:
    1. Corrective action cost: There are three revisions for this item:
      - a. The June 30, 2012 draft RIA does not include corrective action costs in the baseline (i.e., all four regulatory options feature full cost of corrective action implementation). This overstates corrective action costs in the regulatory options if states are remediating sites (in contrast, the draft RIA's benefits assumptions do assume remediation based on state programs). Downward adjust corrective action costs for all four regulatory options to be consistent with benefits.
      - b. Section 4.3.14 of the June 30, 2012 draft RIA applies \$38.166 million average corrective action cost per plant based on an EPA Region 3 study. The Contractor shall replace this number with \$11.4 million (to be updated from 2003\$ to 2012\$) based on an alternative 2004 EPA study of all nationwide RCRA corrective action sites.<sup>2</sup>
      - c. Section 4.3.14 of the RIA needs to be revised so it provides two different corrective action cost assumptions for (a) the Subtitle C option to reflect a larger "facility-wide" corrective cost, and (b) all three D-related options to reflect a relatively smaller "single CCR disposal unit" cost. The COTR will provide the Contractor with assumptions for these two costs.
    2. Update impoundment universe: At least two revisions:
      - a. When EPA Office of Water's (OW's) inventory database for OW's 2010 ICR survey-identified universe of about 1,070 CCR impoundments becomes available in the docket for EPA's April 19, 2013 "Steam Electric Effluent Limitation Guidelines (ELG)" proposed rule, the CCR final rule RIA needs to provide an appendix which lists all 1,070 OW-identified impoundments (i.e., power plant name, power plant city/state location, impoundment name, impoundment size, impoundment function, active vs inactive, etc.) and indicate which impoundments on this master list are not relevant to the scope of the CCR final rule RIA.
      - b. Assign CCR final rule regulatory compliance costs to all impoundments, including "zero tonnage" impoundments.
    3. Draft RIA Exhibit 5H: The six percentages in this Exhibit need to be updated with ORCR's new numbers based on the Summer 2012 revisions to the CCR risk analysis.
    4. Structural failure benefits: This section of the RIA needs to be based on the same assumptions applied in the RIA for EPA's April 19, 2013 "Steam Electric Effluent Limitation Guidelines" proposed rule.
    5. Benefit categories: The contractor shall perform at least two benefit revisions:

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<sup>2</sup> The \$11.4 million figure (2003\$) is from page 4-16 of the 2004 EPA report "Cleaning up the Nation's Waste Sites: Markets and Technology Trends," <http://www.clu-in.org/download/market/2004market.pdf>

- a. The first two monetized benefit categories (beneficial use benefit, and property value enhancement benefit) presented in Chapter 6 can be moved to Chapter 5, and re-title Chapter 5 “Monetized Benefits” and re-title Chapter 6 “Non-Monetized Benefits.”
  - b. The RIA needs to adopt (via appropriate transfer/extrapolation methods) the other benefit categories monetized in the RIA for EPA’s April 19, 2013 “Steam Electric Effluent Limitation Guidelines” proposed rule.
6. Power plant universe: Adjust the 507 “universe” count of coal-fired electric utility plants (which is based on 2009 EIA-923 data), by the public announcements made by utility companies between 2009 and 2013, to either (a) close coal-fired boilers/plants, (b) convert coal-fired boilers/plants to other fuels such as natural gas or biomass, and (c) to convert CCR disposal from wet-sludging impoundments to dry handling (landfills). For a list of these announcements see the **Appendix** attached at the end of this SOW. For example, the November 2012 report by the Union of Concerned Scientists listed as row item 1 in the Appendix indicates (Table C-3, page 83) that utility companies have announced planned retirement of 288 coal-fired boilers in 39 states. Given a nationwide average of about three coal-fired boilers per coal-fired power plant, these 288 boilers represent retirement of 96 coal-fired plants on an equivalency basis (i.e., (288 retired boilers) / (3 boilers per plant) = 96 plants equivalency). Relative to the 507 count of coal-fired power plants in the June 2012 draft RIA, this would constitute a 19% reduction (i.e., (-96 plants) / (507 plants) = -19%). This affected plant count adjustment will require revisions to the RIA’s cost and benefit calculations. Of course, this adjustment should avoid double-counting the application of the EIA’s “Annual Energy Outlook” future projection of coal burned by electric utility plants.
- 3C. Additional possible exhibits to be added to the RIA or RIA Appendices:
    1. State lists: Possible additional state breakdown exhibits in the RIA text or Appendices.
    2. LF & SI fractions: In separate Exhibits provide a break-out into the landfill and surface impoundment fractions for each itemized cost row, for two exhibits:
      - a. Exhibit 3Q baseline costs
      - b. “D-clay & composite” option costs in Exhibit 4K, into respective landfill and impoundment fractions
  - 3D. Re-shuffle contents of RIA Chapters 2 and 3 as follows:
    1. Chapter 2 should be re-titled “Identity of Affected Industries and Disposal Units” and should contain only sections 2.1, 2.2, 3.1, 3.2.1, 3.2.4, 3.2.5, and 3.2.6.
    2. Sections 2.3 and 2.4 should be combined into a new Chapter 3 titled “Regulatory Options & Analytic Framework”
    3. What remains in Chapter 3 after making the adjustment to Chapter 2 indicated above, should be re-numbered as Chapter 4 (and the remainder chapters of the RIA then need to be re-numbered as well).

Note: Three revisions the Contractor shall not perform under Task 3 are:

1. Do not update the RIA’s 2009 EIA-923 data on the “universe” of coal-fired electric utility plants (n = 507) and CCR tonnages.
2. Do not update the 2011\$ price level applied in the RIA.
3. Do not change the 2013 to 2112 100-year period-of-analysis applied in the RIA.

Task 3 Deliverable(s):

- Deliverable shall constitute two items: (a) revised RIA document, and (b) revised RIA Appendices document, both in MSWord electronic format.

## Schedule of Deliverables

The Contractor shall provide electronic versions of all deliverables via email. The Contractor shall also provide in electronic format to the COTR, any accompanying computer models, databases, and/or spreadsheets used to produce the deliverables.

Schedule of Deliverables		
Task & Deliverable		Deliverable Due Dates
Task 1	Provide work plan with a list of deliverables and corresponding due dates, and cost quote.	<u>Draft</u> : According to the terms of contract EP-W-12-013 (i.e., within <b>20 calendar days</b> )
		<u>Final</u> : According to the terms of contract EP-W-12-013 (i.e., within <b>20 calendar days</b> after receipt of COTR comments)
Task 2	Finish drafting responses to the 1,100 public comments on EPA's RIA for the 2010 CCR proposed rule.	<u>Draft</u> : Contractor already supplied draft responses under the base year work assignment B-06
		<u>Final</u> : No longer than <b>30 calendar days</b> after Contractor receives feedback comments from the COTR on the draft responses.
Task 3	Assist ORCR with revising the June 30, 2012 draft RIA for the CCR final rule, based on one or more <b>Technical Directives</b> from the COTR.	<u>Draft</u> : No later than <b>three months</b> after receipt of Technical Directives.
		<u>Final</u> : No later than <b>two weeks</b> after receipt of COTR feedback comments, unless otherwise specified by the CO according to COTR's advice.

## Appendix A

### List of Recent (2009-2013) Reports & News Items Which Identify Plans Publicly-Announced by Electric Utility Companies to:

**1. Retire (Close) Coal-Burning Boilers/Plants**

**2. Convert Coal-Fired Boilers/Plants to Other Fuel Types (Such as Natural Gas or Biomass)**

**3. Convert Wet-Sluided CCR Disposal in Impoundments (i.e., Shut-Down Ponds) to Dry CCR Disposal in Landfills**

Row	Date	Author	Report or News Title	Source Weblink
<b>A. Two Recent Reports (2012):</b>				
1	November 2012	Union of Concerned Scientists (UCS)	Ripe for Retirement the Case for Closing America's Costliest Coal Plants	<a href="http://www.ucsusa.org/assets/documents/clean_energy/Ripe-for-Retirement-Full-Report.pdf">http://www.ucsusa.org/assets/documents/clean_energy/Ripe-for-Retirement-Full-Report.pdf</a>
2	October 2012	General Accountability Office (GAO)	Electricity Significant Changes are Expected in Coal-Fueled Generation, but Coal is Likely to Remain a Key Fuel Source	<a href="http://www.gao.gov/products/GAO-13-72">http://www.gao.gov/products/GAO-13-72</a>
<b>B. Assortment of Recent News Items (2009-2013)</b>				
1	April 3, 2009	unknown author	FirstEnergy to convert coal-fired plant into biomass	<a href="http://www.wasterecyclingnews.com/article/20090403/NEWS03/304039996/firstenergy-to-convert-coal-fired-plant-into-biomass">http://www.wasterecyclingnews.com/article/20090403/NEWS03/304039996/firstenergy-to-convert-coal-fired-plant-into-biomass</a>
2	August 17, 2010	Matt Cover	Dozens of Old-Style Coal Plants are Going Up Around the U.S.	<a href="http://cnsnews.com/news/article/dozens-old-style-coal-plants-are-going-around-us">http://cnsnews.com/news/article/dozens-old-style-coal-plants-are-going-around-us</a>
3	December 8, 2011	BNA (Andrew Childers)	Agreement by Energy Companies to Retire Coal-Fired Plants Clears Way for Merger	<a href="http://www.southernenvironment.org/uploads/fck/file/duke-progress-selc-settlement-120811.pdf">http://www.southernenvironment.org/uploads/fck/file/duke-progress-selc-settlement-120811.pdf</a>
4	January 26, 2012	Julie Greene	FirstEnergy to close power plant in Williamsport	<a href="http://articles.herald-mail.com/2012-01-26/news/30669288_1_firstenergy-environmental-integrity-project-power-station">http://articles.herald-mail.com/2012-01-26/news/30669288_1_firstenergy-environmental-integrity-project-power-station</a>
5	August 9, 2012	Rachel Cernansky	Largest U.S. Coal Ash Pond to Close, But Future Rules Still Undecided	<a href="http://news.nationalgeographic.com/news/energy/2012/08/120809-little-blue-run-coal-ash-pond-to-close/">http://news.nationalgeographic.com/news/energy/2012/08/120809-little-blue-run-coal-ash-pond-to-close/</a>
6	August 27, 2012	Mario Parker	Most Coal-to-Gas Switching in U.S. Permanent, Moody's Says	<a href="http://www.bloomberg.com/news/2012-08-27/most-coal-to-gas-switching-in-u-s-permanent-moody-s-says-1-.html">http://www.bloomberg.com/news/2012-08-27/most-coal-to-gas-switching-in-u-s-permanent-moody-s-says-1-.html</a>
7	January 7, 2013	unknown author	Georgia Power seeks approval to retire generating units at four plants	<a href="http://www.prnewswire.com/news-releases/georgia-power-seeks-approval-to-retire-generating-units-at-four-plants-185877142.html">http://www.prnewswire.com/news-releases/georgia-power-seeks-approval-to-retire-generating-units-at-four-plants-185877142.html</a>
8	February 01, 2013	Bruce Henderson	Coal plant's closing leaves questions about ash	<a href="http://www.charlotteobserver.com/2013/02/01/3827809/coal-plants-closing-leaves-questions.html">http://www.charlotteobserver.com/2013/02/01/3827809/coal-plants-closing-leaves-questions.html</a>
9	March 18, 2013	Santee Cooper	Executive Summary of Closeout Plan	<a href="https://www.scdhec.gov/environment/water/docs/ww_ExecSummary.pdf">https://www.scdhec.gov/environment/water/docs/ww_ExecSummary.pdf</a>

Source: Compiled 23 April 2013 by Mark Eads & Rachel Alford, EPA Office of Resource Conservation & Recovery.

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-6				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number      1			CCR   RIA				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: The purpose of this amendment is to approve the contractor's work plan/cost estimate dated May 20, 2013 for a LOE of 852 hours and \$81,595.55 (b)(4) cost (b)(4) fee).										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO    22 (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 852				
04/30/2012   To   04/29/2014										
This Action:						0				
Total:						852				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Mark Eads						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number   703-308-8615				
						FAX Number:				
Project Officer Name   Shannon Sturgeon						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 703-605-0509				
						FAX Number: 703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name   Christie Deskiewicz						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 202-564-3316				
						FAX Number:				



<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-6				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000002				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number      1			CCR   RIA				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: The purpose of this action is to add an additional task to WA 1-6 titled "RIA for CCR regulation" with an LOE of 382 hours. The statement of work is attached. The contractor shall submit a work plan and cost estimate in accordance to the terms of the contract.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <span style="border: 1px solid black; padding: 2px;">22</span> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE:		0		
04/30/2012   To   04/29/2014										
This Action:						1,234				
Total:						1,234				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Mark Eads						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number   703-308-8615				
						FAX Number:				
Project Officer Name   Shannon Sturgeon						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:   703-605-0509				
						FAX Number:   703-308-7903				
Other Agency Official Name   Lee Hofmann						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:   703-308-8479				
						FAX Number:				
Contracting Official Name   Eulvid Rocque						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:   202-564-8316				
						FAX Number:				



**Amendment Adding Task 4 to WA 1-06 (EP-W-12-013)**  
20 August 2013

Work Assignment Title: Regulatory Impact Analysis for ORCR's Coal Combustion Residuals Final Rule

Contract No.: EP-W-12-013 (Industrial Economics Inc.)

Work Assignment No: 1-06

Prepared by: Mark Eads, ORCR Economist, 703-308-8615 (COTR)  
Rachel Alford, ORCR Program Analyst, 703-305-0894 (Alternate COTR)  
US Environmental Protection Agency  
Office of Resource Conservation & Recovery (ORCR)  
Program Management, Communications & Analysis Division (PMCAO)  
1200 Pennsylvania Avenue, NW, Mailstop 5305P  
Washington, DC 20460

SOW period: Upon receipt to April 29, 2014

**Purpose of this Amendment**

The purpose of this amendment is to add Task 4 to work assignment WA 1-06. Task 4 was initially formulated by the COTR in the June 22, 2012 Statement of Work (SOW) for the Contractor's prior work assignment B-06 which expired on April 29, 2013.

Task 4 involves coordinating the contents (i.e., scope, methods, data, and analyses) of the RIA for the CCR final rule, with the RIA for the EPA Office of Water's (OW's) upcoming "*Steam Electric Power Generating Effluent Limitations Guidelines*" (ELG) final rule. Both rules will affect an overlapping set of the same waste management units (i.e. coal ash disposal surface impoundments or "ponds") located at electric utility plants.

The Contractor did not begin Task 4 under the prior work assignment B-06 because the COTR did not provide the Contractor with a Technical Directive to begin that task. The COTR did not provide a Technical Directive for Task 4 because both of EPA's rulemaking schedules for the CCR rule and the Steam Power ELG rule became delayed in 2012:

- CCR rule: EPA published the CCR proposed rule in the Federal Register on June 21, 2010. EPA's development of the CCR final rule is currently delayed by an April 2012 lawsuit and ensuing court litigation beyond EPA's original October/ November 2012 final rule publication target; the court has scheduled its next hearing on the lawsuit for October 11, 2013.
- Steam Electric ELG rule: The June 7, 2013 Federal Register publication of EPA's Steam Electric Power ELG proposed rule was delayed six months from EPA's original consent decree deadline for that rule of November 20, 2012.

EPA currently intends to (a) coordinate the regulatory scope of both final rules by eliminating overlapping regulatory requirements and coordinating industry compliance deadlines, and (b) align the schedules of both final rules for finalization (i.e. EPA Administrator signatures) by December 2014<sup>1</sup> and Federal Register publication in January 2015. EPA announced its intention to coordinate both final rules on pages 34441 & 34442 of the June 7, 2013 Federal Register notice of the Steam Electric ELG proposed rule, according to two components as described in the following Federal Register excerpts:

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<sup>1</sup> The December 2014 target dates for both rules are from slide 14 of EPA's February 11, 2013 "Coal Combustion Residue – Steam Electric ELG Environmental Benefits Matrix" internal briefing document for EPA Acting Administrator Bob Perciasepe.

*“Intersection Between the Proposed ELG and Coal Combustion Residuals Rules: This section describes EPA’s current thinking on how a final RCRA Coal Combustion Residuals (CCR) rule might be aligned and structured to account for any final requirements adopted under the ELGs for the Steam Electric Power Generating point source category. Consistent with RCRA section 1006(b), EPA seeks to effectively coordinate any final RCRA requirements with the ELG requirements, to minimize the overall complexity of these two regulatory structures, and facilitate implementation of engineering, financial and permitting activities...*

*Coordination of CCR Substantive Requirements with ELG Requirements. EPA’s current thinking is to focus primarily on the areas in which the proposed CCR and ELG rules may regulate or affect the same unit or activity. The scope of the two rules differs; although both of these rules would affect the disposal (i.e., discharge) of coal combustion wastes to and from surface impoundments (i.e., “ponds”) at power plants, only the CCR rule would regulate the disposal of CCRs in landfills. Accordingly, in looking at how to coordinate the requirements of the two rules, EPA is primarily focusing on any requirements applicable to surface impoundments, rather than modifications to any requirements applicable to CCR landfills which would be addressed solely under any CCR rule....*

*Coordination of Timelines for Implementation. The second component of EPA’s approach to integrating any CCR rule with any ELG rule relates to the coordination of compliance and implementation deadlines. EPA’s goal is that, consistent with its statutory requirements, the implementation dates for each rule would not require facilities to make decisions without understanding the implications that such decisions would have for meeting any requirements of each rule. Thus, EPA’s current approach is to enable a facility to determine whether any changes to its operations are needed to comply with the Steam Electric ELG— and if so, what those might be—before the facility would be required, for example, to decide whether to close or retrofit any surface impoundments pursuant to any CCR rule....”*

However, since the June 22, 2012 date the COTR initially formulated Task 4 for the Contractor’s prior work assignment B-06, the substance of the work required for Task 4 has changed reflecting the above rulemaking schedule changes. The initial orientation of Task 4 involved the Contractor providing data and analyses to EPA-OW to assist with formulation of the RIA for the Steam Electric Power ELG proposed rule. However, now that the Steam Electric Power ELG rule has already been proposed three months ago, Task 4 of this Amendment involves the Contractor harmonizing the CCR final rule RIA with the RIA for the Steam Electric Power ELG final rule. Thus, the COTR provides below a revised version of Task 4 for this Amendment.

#### **Task 4: Harmonize the CCR Final Rule RIA with the RIA for EPA’s Steam Electric Power Generating ELG Final Rule**

The Contractor shall harmonize the scope, methods, data, and analyses of the RIA for the CCR final rule, with the contents of the RIA for EPA’s upcoming Steam Electric Power Generating ELG final rule. The extent of this harmonization shall depend upon the upcoming decisions EPA upper management makes in late 2013 or early/mid 2014 concerning how these two final rules are to be integrated according to EPA’s coordination of their respective (a) regulatory requirements, and (b) implementation timelines (i.e. industry compliance deadlines). Because as of the date of this Amendment such integration decisions have not been made by EPA management, the Contractor shall not begin Task 4 until after receipt of one or more Technical Directives from the COTR.

## Schedule of Deliverables

The Contractor shall provide electronic versions of all deliverables via email. The Contractor shall also provide in electronic format to the COTR, any accompanying computer models, databases, and/or spreadsheets used to produce the deliverables.

Schedule of Deliverables		
Task & Deliverable		Deliverable Due Dates
Task 4	Revise the RIA for the CCR final rule to coordinate with EPA's RIA for the " <i>Steam Electric Power Generating Effluent Limitations Guidelines</i> " (ELG) final rule.	<u>Draft RIA</u> : Not later than <b>three months</b> after receipt of Technical Directives.
		<u>Final RIA</u> : Not later than <b>two weeks</b> after receipt of COTR feedback comments, unless otherwise specified by the CO according to COTR's advice.

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-6				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000003				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014 Base                      Option Period Number    1			Title of Work Assignment/SF Site Name CCR RIA				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From   04/30/2013   To   04/29/2014				
Comments: The purpose of this amendment is to approve the contractor's work plan dated 10/28/13 with cost (b)(4) fee (b)(4) \$2,372.22 for a total of \$38,352.02 and LOE of 382 hours. Total Cost Ceiling for this work assignment is \$119,947.57 (b)(4) cost (b)(4) fee) with Total LOE of 1,234 hours.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO    22 (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE: 1,234						
04/30/2012 To 04/29/2014										
This Action:				0						
Total:				1,234						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:			LOE:			
Cumulative Approved:				Cost/Fee:			LOE:			
Work Assignment Manager Name   Mark Eads							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number   703-308-8615			
							FAX Number:			
Project Officer Name   Shannon Sturgeon							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 703-605-0509			
							FAX Number: 703-308-7903			
Other Agency Official Name							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number:			
							FAX Number:			
Contracting Official Name   Eulvid Rocque							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 202-564-8316			
							FAX Number:			

Work Assignment Form, (WebForms v1.0)

## **Work Assignment Number: 1-6-amendment 4**

Title: CCR Rule RIA

Contracting Officer's Representative (COR): Mark Eads

Alternate COR: Rachel Horton

Address: OSWER/ORCR/ERAS

Mail Code: 5305P

1200 Pennsylvania Ave., NW0

Washington, D.C. 20460

Telephone: (703) 305-0894

(703) 308-8895 (front office)

(703) 308-7903 (FAX)

### **Amendment to Allow for Contractor Travel**

The purpose of this amendment is to add travel for One (1) to two (2) employees of the contractor, Industrial Economics, Inc (IEc) to meet with Office of Resource Conservation and Recovery (ORCR) and Office of Water (OW) in Crystal City, Virginia for meetings of 1 to 2 days for work assignment WA 1-06. This is in part to coordinate revisions to the Coal Combustion Residuals (CCR) Rule Regulatory Impact Analysis (RIA).

The meeting or meetings will likely be scheduled any time after the week of January 28<sup>th</sup>, 2014. An Outlook invite will be sent to the contractor with the specific day or days for the meetings.

The contractor shall submit a work plan and cost estimate in accordance to the terms of the contract for traveling staff of 1 to 2 IEc Employees to coordinate revisions to the Coal Combustion Residuals (CCR) Rule Regulatory Impact Analysis (RIA).

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-6				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000005				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number      1			CCR   RIA				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: The purpose of this amendment is to approve the Contractor's work plan dated February 17, 2014 workplan to add 22 hours for travel: \$3,797.13 (b)(4) cost (b)(4) fee). New Total WA LOE 1256 and \$123,744.70 (b)(4) cost (b)(4) fee).										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO    22 (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE: 1,256						
04/30/2012   To   04/29/2014										
This Action:				0						
Total:				1,256						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:			LOE:			
Cumulative Approved:				Cost/Fee:			LOE:			
Work Assignment Manager Name   Mark Eads							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number   703-308-8615			
							FAX Number:			
Project Officer Name   Shannon Sturgeon							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 703-605-0509			
							FAX Number: 703-308-7903			
Other Agency Official Name							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number:			
							FAX Number:			
Contracting Official Name   Eulvid Rocque							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 202-564-8316			
							FAX Number:			

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-6				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000006				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number      1			RIA for ORCR's CCR Final Rule				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: The purpose of this amendment is to add 180 LOE to WA 1-06. The new LOE total is 1436. A revised statement of work is attached. The contractor shall submit work plan and cost estimate as it relates to request.										
<input type="checkbox"/> Superfund    Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <span style="border: 1px solid black; padding: 2px;">22</span> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
04/30/2012   To   04/29/2014										
This Action:						1,436				
Total:						1,436				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Mark Eads						Branch/Mail Code:				
_____ (Signature)    (Date)						Phone Number   703-308-8615				
						FAX Number:				
Project Officer Name   Shannon Sturgeon						Branch/Mail Code:				
_____ (Signature)    (Date)						Phone Number: 703-605-0509				
						FAX Number: 703-308-7903				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)    (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name   Eulvid Rocque						Branch/Mail Code:				
_____ (Signature)    (Date)						Phone Number: 202-564-8316				
						FAX Number:				



## Statement of Work:

### Amendment to Add 180 Hours to Task 3 of Work Assignment 1-06 (EP-W-12-013)

13 March 2014

WA Title: Regulatory Impact Analysis for ORCR's Coal Combustion Residuals Final Rule  
Contract No.: EP-W-12-013 (Industrial Economics Inc.)  
Work Assignment No: 1-06  
Prepared by: Mark Eads, COTR, 703-308-8615  
EPA Office of Resource Conservation & Recovery (ORCR)  
Alt. COTR: Rachel Horton, EPA-ORCR, 703-305-0894  
Project Officer: Shannon Sturgeon, EPA-ORCR, 703-605-0509

#### A. Purpose of this Amendment

The purpose of this amendment is to add 180 hours to Task 3 “*Revise the June 30, 2012 Draft RIA for the CCR Final Rule*” of work assignment (WA) 1-06. Task 3 involves the Contractor performing revisions to the Contractor's June 30, 2012 draft “regulatory impact analysis” (RIA) for ORCR's upcoming January 2015 coal combustion residuals (CCR) final rule. The June 2012 draft RIA is the Contractor's deliverable from the prior base year WA B-06 under the same contract EP-W-12-013.

#### B. Justification for this Amendment

Additional level-of-effort is necessary for Task 3 of WA 1-06 for two reasons:

1. ORCR management recently made major new decisions concerning the substance of ORCR's upcoming January 2015 CCR final rule.
2. A court order issued in January 2014 imposed a December 2014 deadline for the CCR final rule.

Each justification by the COTR (Eads) is explained below.

##### B1. Recent ORCR Management Decisions Changed the Substance of the CCR Final Rule

ORCR management made major new decisions in January and February 2014 which changed the substance of the CCR final rule. However, prior to January 2014 the Contractor had already mostly completed Task 3 by producing a draft revised RIA deliverable under Task 3 in November 2013. The additional revisions to the November 2013 draft RIA which are now required to conform to the new decisions exceed the 725 hours allocated for Task 3 of the Contractor's May 20, 2013 workplan for WA 1-06.

The major new decisions made in January and February 2014 by ORCR management which have changed the substance of ORCR's upcoming January 2015 CCR final rule include:

- Regulatory option: Formulation of revised technical requirements for the CCR final rule (i.e., a “*Modified D-Prime*” regulatory option replaces the “*D Clay & Composite*” regulatory option which EPA Administrator Lisa Jackson selected in February 2012 for the CCR final rule).
- Industry compliance costs: Four new regulatory compliance cost elements:
  - Cost of future “*tapered vertical expansion*” of CCR landfills rather than “*horizontal expansion*.”
  - Cost of perpetual dredging re-use of CCR surface impoundments for CCR storage (rather than assuming limited lifespans for CCR disposal).

- Cost of building new future CCR “*pile landfills*” on top of existing CCR surface impoundments (rather than assuming new land acquisition for future new CCR landfills).
- Cost of “*de-watering & breaching*” inactive CCR surface impoundments.
- Operating lifespans: Revisions to CCR disposal landfill and CCR disposal surface impoundment future operating lifespan assumptions (now assume 80 years rather than the previous 40 years assumption).
- Unlined impoundments: Only existing unlined CCR surface impoundments which are detected to leak CCR contamination into the groundwater above at levels which exceed the MCL for arsenic shall be subject to the “*retrofit the unlined CCR impoundment with a liner or shut-down and close the impoundment*” requirement in the CCR final rule (formerly all unlined CCR impoundments would be subject to this “*retrofit or close*” requirement).
- Affected impoundments: The regulatory requirements of the CCR final rule shall apply to both active and inactive CCR surface impoundments (in comparison, the November 2013 draft RIA only modeled the final rule as applying to active impoundments).

## **B2. Recent Court Order Deadline of December 2014 for the CCR Final Rule**

Furthermore, in addition to the above major new decisions, on January 29, 2014 the DC District Court ordered<sup>1</sup> the EPA to complete a CCR final rule for signature by the EPA Administrator no later than December 19, 2014. In order to complete all steps of EPA’s action development process for the CCR final rule to meet this court-ordered deadline, ORCR’s 2014 production schedule for the CCR final rule requires a revised RIA by end of April 2014. Consequently, the Contractor has only two months (March and April 2014) to make the revisions needed to the draft RIA to conform to the major new ORCR management decisions listed above.

To meet ORCR’s 2014 production schedule for the CCR final rule, the COTR (Eads) presumes the Contractor will need to assign extra staff and engineering sub-contractor assistance under Task 3 to meet this tight schedule. In fact, the Contractor indicated in its February 19, 2014 Monthly Progress Report for WA 1-06 that the Contractor has already assigned one additional staff person (Nathan Braun) to assist with revising the computer modeling for the draft RIA. This is the COTR’s second justification for the need to add hours to Task 3 of WA 1-06.

## **C. Amendment to Schedule of Deliverables for Task 3**

The Contractor’s November 2013 revised draft RIA (which revised the Contractor’s prior June 30, 2012 draft RIA produced under the base year WA B-06) constitutes the “*Draft*” deliverable for Task 3 of WA 1-06. In accordance to meeting ORCR’s 2014 production schedule for the CCR final rule (as discussed in section B above), this amendment directs the Contractor to amend the Schedule of Deliverables for Task 3 so that the “*Final*” Task 3 deliverable shall be due April 29, 2014, a date which corresponds to the final performance day for WA 1-06.

In addition, the Contractor shall submit a revised workplan and budget for this amendment.

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<sup>1</sup> A Consent Decree signed by all parties to the Appalachian Voices vs Gina McCarthy lawsuit was delivered to the Federal DC District Court on January 29, 2014. Section III (page 5) of the Consent Decree states: “*The EPA Administrator shall, by December 19, 2014, sign for publication in the Federal Register a notice taking final action regarding EPA’s proposed revision of RCRA Subtitle D regulations pertaining to coal combustion residuals.*” The Consent Decree (18 pages) is available online (as of 13 March 2014) at: <http://earthjustice.org/sites/default/files/files/044-1-Consent-Decree.pdf>

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-6				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000007				
Contract Number EP-W-12-013			Contract Period   04/30/2012   To   04/29/2014			Title of Work Assignment/SF Site Name				
			Base                      Option Period Number      1			RIA for CCR final rule				
Contractor INDUSTRIAL ECONOMICS, INCORPORATED					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/30/2013   To   04/29/2014					
Comments: The purpose of this amendment is to approve the contractor's work plan dated 3/31/14 which adds 180 LOE equaling to (b)(4) cost (b)(4) fee = \$19,992.88. The new total LOE and cost/fee ceiling is now 1,436 hours and (b)(4) cost (b)(4) fee) \$143,737.58. The contractor is not allow to go over the approved ceiling without the approval of the contracting officer.										
<input type="checkbox"/> Superfund					Accounting and Appropriations Data					<input checked="" type="checkbox"/> Non-Superfund
SFO (Max 2) <span style="border: 1px solid black; padding: 2px;">22</span>					Note: To report additional accounting and appropriations date use EPA Form 1900-69A.					
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE: 1,436						
04/30/2012   To   04/29/2014										
This Action:				0						
Total:				1,436						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:			LOE:			
Cumulative Approved:				Cost/Fee:			LOE:			
Work Assignment Manager Name   Mark Eads							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number   703-308-8615			
							FAX Number:			
Project Officer Name   Shannon Sturgeon							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 703-605-0509			
							FAX Number: 703-308-7903			
Other Agency Official Name							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number:			
							FAX Number:			
Contracting Official Name   Eulvid Rocque							Branch/Mail Code:			
_____ (Signature)                      (Date)							Phone Number: 202-564-8316			
							FAX Number:			